VAX VTX
Operator's Guide

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This manual describes the utilities that the VTX operator uses for the daily operation and maintenance of the VTX system.

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Preface

Purpose of This Manual

This manual describes VAX VTX from the VTX operator's point of view. It contains information on the VTX components so the VTX operator can configure them properly, start them regularly, and maintain them efficiently. It also explains how to use the three system management utilities to control the VTX components, to establish and maintain accounts for subscribers and information providers, and to verify the VTX infobase.

Intended Audience

This manual is written for individuals assigned to oversee the operation and maintenance of a VAX VTX system. This manual assumes you are familiar with:

- The DIGITAL Command Language (DCL)
- A text editor (such as DIGITAL's EDT, TPU, WPS-PLUS)
- At least one of DIGITAL's video terminals (VT1nn, VT2nn, VT3nn)

Familiarity with VMS system management and networking is also recommended.

Operating System Information

To verify which versions of your operating system are compatible with this version of VAX VTX, check the Software Product Description (SPD), which is included in the VAX VTX kit.

Structure of This Manual

This manual is organized as follows:

Chapter 1	Provides an overview of the VAX VTX system, explaining each of the system components that pertain to an operator's job. This chapter also includes descriptions and formats of three sample VTX system configurations.
Chapter 2	Explains how to open and close VTX files and operate a VAX VTX server, concentrator, update server, and Workbench server.
Chapter 3	Explains how to set up and manage user accounts for VTX subscribers, VTXUPD information providers, and Workbench information providers, and how to create and use a base page determination file.
Chapter 4	Explains how to verify and ensure the integrity of an infobase.
Appendix A	Contains a sample report generated by the Infobase Verification Utility.
Appendix B	Explains the fields in a VTX account usage record.
Appendix C	Explains the fields in a VTX server log record.
Appendix D	Describes the Workbench library files.
Appendix E	Contains information on VTX logicals.
Appendix F	Describes how to convert page files, Workbench library files, and APMS index files that were created prior to VTX Version 4.0 so they can be used with VTX Version 4.0.
Appendix G	Contains troubleshooting information on VTX problems.
Appendix H	Explains the error messages generated by the VTXCTL Utility.
Appendix I	Explains the error messages generated by the VTXACU Utility.
Appendix J	Explains the error messages generated by the VTXIVU Utility.

Related Documentation

The documentation set for VAX VTX includes:

VAX VTX Installation Guide
VAX VTX Guide to Designing and Implementing an Infobase
VAX VTX Information Provider's Guide
VAX VTX Operator's Guide
VAX VTX Guide to Modifying the Terminal Control Program (TCP)
VAX VTX Subscriber's Booklet

VAX VTX Subscriber's Card
VAX VTX/VALU Summary Description
VAX VTX/VALU Guide to Using VAS
VAX VTX/VALU Guide to Using RUSL
VAX VTX/VALU Guide to Using ELK

VAX VTX Version 4.0 also comes with online release notes, which you can access in SYS$HELP:VTX040.RELEASE_NOTES.

A glossary for all the VAX VTX manuals is contained in the *VAX VTX Guide to Designing and Implementing an Infobase*. A glossary for all the VAX VTX/VALU manuals is contained in the *VAX VTX/VALU Summary Description*.

For information about using a concentrator as a P.S.I. network process that receives incoming X.29 calls, see the *VAS P.S.I. X29 Programmer's Guide*.

For information about DECnet, see the *VMS System Management Subkit*.

Conventions

$	The dollar sign is the system prompt. It indicates that the VMS command interpreter is ready for command input.
WORD	An uppercase word in a syntax format is a required word. You must include it in the statement.
word	A lowercase word in a syntax format indicates a syntax element that you supply.
[ ]	Square brackets enclose optional clauses from which you can choose one or none.
{ }	Braces enclose clauses from which you must choose one alternative.
|	A vertical bar separates the syntax elements that are enclosed in braces and indicates that you must choose one of the enclosed options.
. . .	Horizontal ellipsis means you can repeat the preceding element.
. . .	Vertical ellipsis means information not directly related to the example has been omitted.

Chapter 1

Features and Concepts

VAX VTX is a videotex system that provides a distributed electronic document retrieval service. Four categories of users participate in a VTX system:

Subscriber	End user (or consumer) of the information
Information provider (IP)	Individual or application that prepares and maintains the information
VTX operator	Individual responsible for the daily operation of the VTX system
Infobase designer	Individual, or team, who plans the logical structure of the infobase

This chapter describes VTX from the VTX operator's point of view. It briefly describes the components of VTX and how they function, and gives a summary description of the tools used to manage a VTX system. It also includes a description of sample VTX system configurations.

1.1 Overview of VTX

To the operator, a VTX system is a set of modular software utilities and programs that manage system communication, terminal control, and subscriber and information provider access. The components can be assembled in various ways to reflect the needs and restrictions of specific sites.

For example, an international corporation might require a distributed VTX infobase with numerous remote links, an elaborate communications network, and the ability to offer information in various languages. A small business environment with a single computer, however, would require a simpler VTX configuration. A VTX system operator must be familiar with the various

VTX components to be able to configure them properly, start them regularly, and maintain them efficiently.

1.2 VTX Components

A VTX system consists of several components, which include the following:

- Infobase
- Terminal control program (TCP)
- VAX VTX server
- Concentrator
- Update server
- VAX VTX Workbench server
- A set of VTX operator system management utilities: VTX Control Utility, VTX Account Control Utility, and VTX Infobase Verification Utility
- A set of VTX information provider tools: VAX VTX Workbench Utility, VTX Update Utility, Automatic Page Management System, VTX Print Queue paginator, and custom-written information provider tools developed using RUSL
- Remote applications written with VAX VTX/VALU ELK or VAX VTX/VALU VAS

1.2.1 Infobase

A VTX infobase contains all the information available to subscribers of a VTX service. Infobase information is stored and retrieved in units called pages. A VTX page can be a menu, a form, an informational text/graphic display, a template page, or a link to a remote process. For a detailed explanation of how to create, maintain, and navigate through a VTX infobase, see the *VAX VTX Guide to Designing and Implementing an Infobase* and the *VAX VTX Information Provider's Guide.*

The VTX infobase consists of two types of files:

- Page files—Also known as VTD files
- Keyword files—Also known as VTK files

A VTD file is simply a logical collection of pages. The pages in a VTD file fall within a certain range of page numbers. You can have one VTD file or many in your infobase.

Note that you must convert pre-Version 4.0 VTD files to VTX Version 4.0 format. See Appendix F for information about using the required page file conversion program.

A VTK file is an optional file that contains keywords that point to pages in the infobase. Each VTK file is assigned a range of page numbers. Keywords are placed in the VTK file whose page ranges include the page number that the keyword points to. You can have zero, one, or many VTK files in your infobase.

1.2.2 Terminal Control Program (TCP)

Subscribers run the terminal control program (TCP) whenever they access VTX from their terminals.

When a subscriber accesses VTX, the TCP takes control of the subscriber's terminal. The terminal then becomes a VTX terminal, under TCP control, until the subscriber exits from VTX. The TCP has two primary functions:

- Transmitting subscriber requests to a VTX infobase server
- Receiving the requested information, formatting it, and displaying it on the subscriber's terminal

The TCP contains several terminal specific modules to handle the different terminal types that VTX supports. For example, when subscribers using VTX from VT100 terminals run the TCP, the VT100 module in the TCP is activated.

The TCP is responsible for interpreting VTX function requests from the subscriber's terminal and transmitting them in a format the VTX server can understand. Because keyboards vary from terminal to terminal, the TCP must correctly tell VTX which function the subscriber wants when he or she presses a key. For example, where one terminal offers the VTX BACKUP function through the PF3 key, another terminal might offer the same function through a key labeled F3 or through a combination of keys. The TCP matches the code transmitted by the keystroke to the proper VTX functions.

Rather than transmit the formatted page as requested by the subscriber, the server quickly transmits a packet of information about the requested page. The requesting TCP then uses the information to format and display the page at the subscriber's terminal. By taking the responsibility for page formatting and display from the server, the TCP allows the server to handle high volumes of simultaneous infobase page requests efficiently.

When the TCP is started, it first tries to connect to a specific VTX infobase server whose logical name is VTX$SERVER. Once the connection is made, subsequent commands from the terminal are VTX commands. Depending on how VTX$SERVER was defined when VTX was installed, this connection can be either to a concentrator or to a server. See Section 1.8 for more information on how TCPs connect to servers.

1.2.3 VTX Server

The VTX infobase server is a process that handles subscriber requests for the pages in a VTX infobase. The server receives page requests from terminal control programs, retrieves the requested information from the VTX infobase, and then transmits the page information back to the requesting terminals for display.

The server runs as a single VMS process but can serve the needs of many subscribers simultaneously. If every subscriber who wanted to retrieve information from the VTX infobase started a separate VMS process, system performance would quickly degrade because of the load. By running a single server process, VTX is able to serve many subscribers simultaneously and still make efficient use of the computer's resources.

You can use the Account Control Utility (VTXACU) to limit the access that subscribers and information providers have to certain pages. This utility allows you to specify which pages or page ranges a subscriber or information provider can access. See Chapter 3 for a complete description of the VTXACU Utility.

1.2.4 Concentrator

A concentrator has four main uses in VTX:

- Concentrates multiple terminal or LAT ports accessing VTX over one or more DECnet links
- Links a terminal control program with a remote server
- Allows access to VTX from IBM 3270 data stream terminals
- Allows access to VTX from terminals that are part of the X.29 packet switching data network

The concentrator controls a group of terminals or LAT ports all using VTX, whereas the terminal control program (TCP) controls a single-terminal VTX session. In a VTX configuration with only one computer, a concentrator is most appropriate when the VTX operator wants to establish certain terminals for VTX use only. Subscribers who use VTX through a terminal controlled by a concentrator program can do nothing else from that terminal. One use for such an arrangement of terminals controlled by a concentrator is a set of dedicated VTX terminals located throughout an airport lobby. (LAT ports assigned to a concentrator can also be configured so that subscribers can break out of VTX and log in to other LAT services.)

The concentrator also handles DECnet communication between nodes in a distributed VTX configuration. In this capacity, the concentrator allows a subscriber's terminal control program to communicate with a remote server. A single DECnet link from the concentrator to the server on another node is much more efficient than a single DECnet link for each terminal control program. See the *VAX VTX Guide to Designing and Implementing an Infobase* for a discussion of local and remote server infobases.

Finally, the concentrator allows access to VTX for IBM 3270 data stream terminals and terminals that are part of a packet switching data network (X.29). Concentrator support for these two types of terminals is explained in the *VAX VTX Guide to Modifying the Terminal Control Program (TCP)* and in the concentrator section of Chapter 2 in this manual.

1.2.5 Update Server

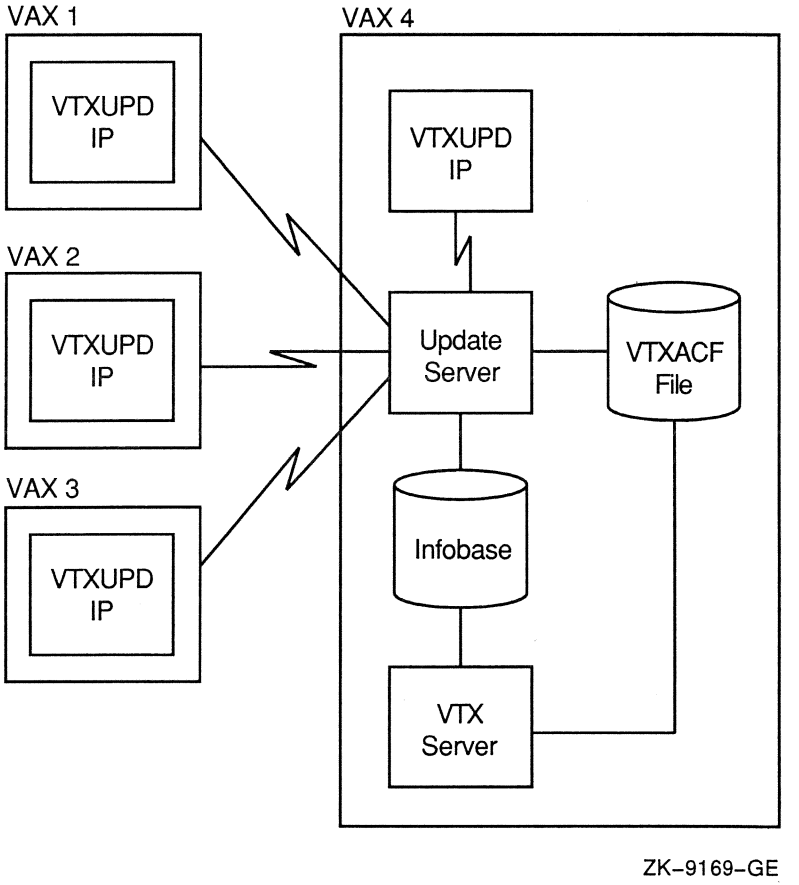
When you configure a VTX system, you will generally have at least a VTX server and an infobase. An update server is optional.

The update server is a process that connects the VTX Update Utility (VTXUPD) with an infobase. Information providers use the VTXUPD Utility to add, delete, or modify pages and keywords in the infobase. (For information on the VTXUPD Utility, see Part III in the *VAX VTX Information Provider's Guide*.)

The VTXUPD Utility can access the local infobase directly, without going through the update server. The main purpose of the update server is to allow information providers using the VTXUPD Utility on remote nodes to update the local infobase. The configuration in Figure 1–1 shows the VTXUPD Utility on three different remote nodes allowing information providers on those nodes to access the update server and update the local infobase. A fourth IP using VTXUPD on the same node as the infobase can update the infobase either directly or through the update server.

You can require information providers to use the update server to access the local infobase, thus limiting the pages they can modify. You use the Account Control Utility (VTXACU) to have the update server restrict information providers' access to infobase pages. See Chapter 3 for more information about the VTXACU Utility.

Figure 1–1: Update Server Configuration



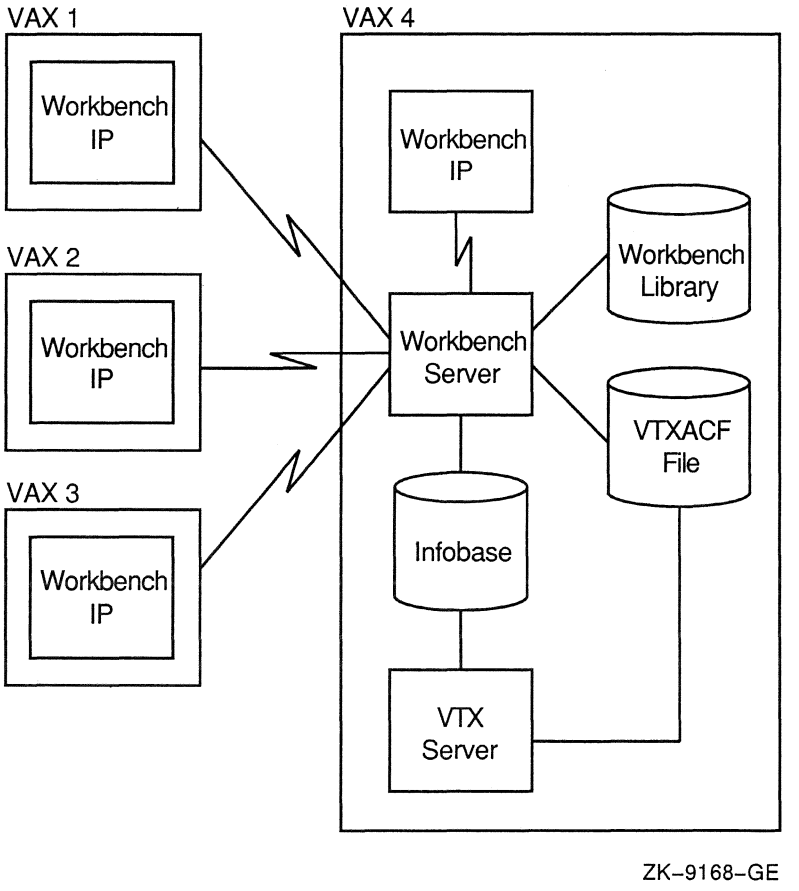
1.2.6 Workbench Server

The Workbench Utility is a simple, graphic interface for information providers. The Workbench server is required to use the Workbench Utility. The Workbench server connects Workbench information providers with a VTX infobase. Specifically, the Workbench server makes infobase pages available for Workbench IPs to modify and incorporate modifications to the VTX infobase. In this way, the Workbench server manages the distributed aspects of infobase updating for Workbench IPs. Figure 1–2 shows the VTX operator's view of the Workbench.

The Workbench server maintains a library of four files for managing Workbench IP modifications. Note that you must convert pre-Version 4.0 Workbench library files to VTX Version 4.0 format. See Appendix F for information about using the required Workbench library file conversion program.

For information on the Workbench Utility, see Part II in the *VAX VTX Information Provider's Guide*.

Figure 1–2: Workbench Server Configuration



1.3 VTX Operator Utilities

There are three utilities available to you as a VTX operator for managing a VTX system:

- VTX Control Utility (VTXCTL)
- VTX Account Control Utility (VTXACU)

- VTX Infobase Verification Utility (VTXIVU)

1.3.1 VTX Control Utility (VTXCTL)

The VTX Control Utility (VTXCTL) lets you manage communications for VTX server, concentrator, update server, Workbench server, and VAS processes. The VTXCTL Utility has six modes, each one distinguished by a different prompt:

Mode	Prompt
Control mode[1]	CTL>
VTX server mode	SRV>
Concentrator mode	CON>
Update server mode	UPDSRV>
Workbench server mode	WBSRV>
VAS mode	VAS>

[1]Control mode controls the five subsidiary modes.

For information on communications management using the VTXCTL Utility, see Chapter 2.

1.3.2 VTX Account Control Utility (VTXACU)

Using the VTX Account Control Utility (VTXACU), you can manage accounts for subscribers and information providers (including Workbench IPs). Management tasks include adding and deleting accounts, as well as monitoring privileges for certain accounts. You can limit the access that certain accounts have to portions of the infobase. For information on account management, see Chapter 3.

You also use VTXACU to enter and maintain the prefix values in a Workbench prefix file. The Workbench server uses these values to generate page numbers for pages created by Workbench IPs. For more information on Workbench prefix files, see the *VAX VTX Guide to Designing and Implementing an Infobase*.

1.3.3 VTX Infobase Verification Utility (VTXIVU)

The VTX Infobase Verification Utility (VTXIVU) lets you verify the integrity of the infobase. In general, you use the VTXIVU Utility to verify sections of an infobase, rather than the entire infobase. After you run the utility, it generates a report of any problems detected. You can use this report to eliminate such problems as faulty page references, expired pages, dangling continuation pages, or unmatched keywords. See Chapter 4 for a discussion of infobase verification. A sample VTXIVU report appears in Appendix A.

1.3.4 Getting Help

VTX offers you online help text about the commands available in all of the VTX operator utilities. The help available is similar to DCL help. You can ask for general help, or you can ask for help on specific topics and subtopics. The command format is:

```
HELP [topic]
```

If you specify a topic, information about that topic is displayed on your terminal. If you do not specify a topic, you will get a list of topics for which help is available.

1.4 VTX Information Provider Tools

The VTX information provider has several tools available for creating and maintaining a VTX infobase:

- Workbench Utility
- VTXUPD Utility
- VTXAPMS Utility
- VTX Print Queue paginator
- Custom-written information provider tools developed using RUSL

For more information on these tools, see the *VAX VTX Information Provider's Guide* and the *VAX VTX/VALU Guide to Using RUSL*.

1.5 System Planning

One of the keys to an effective VTX system is advanced planning. A VTX operator should complete the following tasks before setting up a VTX system:

1. Configure the system communication components, as follows:
   a. Decide which terminals will run the TCP directly and which will be assigned to a concentrator.
   b. Identify the local server and any remote servers.
   c. Create a schematic diagram of the system for later reference.
   d. Use the VTXCTL Utility and its subsidiary modes (SRV, CON, UPDSRV, WBSRV, and VAS) to enable DECnet communications.

   See Section 1.8 for some examples of various system configurations.
2. Establish security standards and user accounts, as follows:
   a. Anticipate and designate all closed user groups within the VTX subscriber base. Closed user groups are used to restrict access by subscribers to specified pages of the infobase. (See Chapter 3 for information about closed user groups.)
   b. Distinguish the groups according to the kinds of information they will be allowed to access. Be sure to communicate these standards to information providers responsible for setting security on individual infobase pages.
   c. Anticipate and designate READ and MODIFY group codes used by the Workbench server for securing pages accessed by Workbench IPs. These group codes are used to restrict access by Workbench IPs to specified pages of the infobase for reading and/or modifying those pages.
   d. Use the VTXACU Utility to create and maintain VTX subscriber and information provider accounts and set up page prefixes for the Workbench Utility.

   See Chapter 3 for information about managing VTX accounts.

   See Section 1.7 to understand how a server responds to a subscriber's connect request.
3. Distribute VTX Subscriber's Cards to subscribers, and advise subscribers as follows:
   a. Make sure subscribers know what command to use to run VTX. (See the *VAX VTX Subscriber's Booklet* for subscriber commands).

b. Have subscribers write in the key sequences they will use to process VTX functions on their terminals.

Once a VTX system has been configured, its user accounts set up, its infobase files created, and its standards established, the VTX operator's tasks become routine. They include starting and stopping VTX, maintaining user accounts, and verifying the infobase periodically.

1.6 Server Logicals

You must define the following server logicals:

- VTX$SERVER

  You must point the system logical name VTX$SERVER to your VTX server. For subscribers to access a VTX infobase, there must be a VTX server running with a DECnet object number that terminal control programs (TCPs) can connect to. Use the following command to establish a DECnet object number for the VTX server and assign that number to the logical VTX$SERVER:

  ```
  $ ASSIGN/SYSTEM node::"""object-number=""" VTX$SERVER
  ```

  For the *node* parameter, enter the name of your node. The default DECnet object number for VTX servers is 43.

  You can also define up to eight failover local VTX servers so that subscribers can be automatically connected to another local server if their primary local server fails. For more information on failover local VTX servers, see Chapter 2.

- VTX$WB_SERVER

  If the Workbench Utility is to be used by information providers, you must point the system logical name VTX$WB_SERVER to your Workbench server, on either the local or remote node. Workbench IPs must have a Workbench server running with a DECnet object number that the Workbench Utility can communicate with before they can perform such operations as LOCATE and UPDATE. Use the following command to establish a DECnet object number for the Workbench server and assign that number to the logical name VTX$WB_SERVER:

  ```
  $ ASSIGN/SYSTEM node::"""object-number=""" VTX$WB_SERVER
  ```

  For example, if the Workbench server is on the remote node VAX1 and has a DECnet object number of 56, you enter the following command:

  ```
  $ ASSIGN/SYSTEM VAX1::"""56=""" VTX$WB_SERVER
  ```

If the Workbench server is on the local node, you can use 0 for the node name, as follows:

```
$ ASSIGN/SYSTEM 0::"""56=""" VTX$WB_SERVER
```

The default DECnet object number for Workbench servers is 56.

- VTX$UPDSRV

  If the VTX Update Utility (VTXUPD) is to be used by information providers, you must point the system logical name VTX$UPDSRV to your update server, on either the local or remote node. For information providers to use VTXUPD to access the VTX infobase, there must be an update server running with a DECnet object number that VTXUPD can communicate with. Use the following command to establish a DECnet object number for the update server and assign that number to the logical VTX$UPDSRV:

  ```
  $ ASSIGN/SYSTEM node::"""object-number=""" VTX$UPDSRV
  ```

  For example, if the update server is on the remote node VAX1 and has a DECnet object number of 156, you enter the following command:

  ```
  $ ASSIGN/SYSTEM VAX1::"""156=""" VTXUPDSRV
  ```

  If the update server is on the local node, you can use 0 for the node name, as follows:

  ```
  $ ASSIGN/SYSTEM 0::"""156=""" VTXUPDSRV
  ```

  The default DECnet object number for update servers is 56.

1.7 Server Account Determination

Account determination is the process a VTX server uses to assign a VTX session to a particular subscriber account. Because VTX can be configured in a variety of ways, a simple service can easily develop into a more sophisticated system requiring efficient methods of account control, page logging, infobase security, and possibly account billing. If you understand how a VTX server handles subscriber account determination, you will be better able to establish efficient methods of page and account control for your VTX service.

When a VTX subscriber tries to connect to a server, the server must first determine a VTX account to which that subscriber's session will be assigned. The following factors make account determination complex:

- A subscriber can have more than one account on a VTX server.

For example, a vice president of a corporation might want one account for general browsing through corporate news and information, and a second, heavily protected account that allows exclusive access to privileged corporate information. Another example is a site that charges subscribers for retrieving VTX pages. In such a situation, a department might choose to give its employees two accounts each: one account for their own use where page retrieval is charged to the employees, and a second account where page retrieval is restricted to a certain set of business-related pages and is charged to the department.

- A VTX system can have more than one server.

  Subscribers can have accounts on one, some, or all the servers in a VTX service. Servers can also treat connect requests from subscribers in a variety of ways. For example, a subscriber who has an account on SERVER_A might still be forced to fill in a login page when connecting to that server. On the other hand, a subscriber who has no account on SERVER_B might try to connect and be logged in automatically under the guest account for that server.

The important point to understand is how a server responds to a subscriber's connect request. Using the VTXACU Utility and the VTXCTL Utility, you can control this process so that it reflects the needs of your VTX service. The following sections describe how the server responds to a connect request.

1.7.1 Receiving a Connect Request

When a subscriber tries to connect to a VTX server, the server receives a connect request from the process that the subscriber is currently connected to. This process could be another server or a TCP. The connect request includes the name of the node that the request originated from. Using this node name, the server that receives the connect request can determine how to proceed.

1.7.2 Responding to the Request

Once the server determines the node where a connect request originates, the server response depends on whether login validation is required. This is referred to as trust and distrust of remote names.

You use the REMOTE command in the VTXCTL Utility to designate trust. The server can be set up to trust all remote names, distrust all remote names, or trust selectively. When the server trusts a connect request, it immediately tries to find a matching account in its account file under which

to log in the requesting session. Conversely, when a server distrusts a connect request, it immediately tries to log in the requesting session under its (the server's) guest account.

1.7.3 Determining the Account

If the server distrusts a connect request, an attempt is made to log the requesting session in the guest account.

If the server trusts a connect request, the account determination process can be more elaborate. The server determines a connect name from the connect request. If the subscriber tries to connect from a VMS account to a server, the connect name is the same as the subscriber's VMS account name. For example, if Mary Smith tries to connect to VTX from her VMS account on node ADMIN, username MSMITH, her connect name is ADMIN::MSMITH.

If a subscriber tries to connect to one server from another server during a VTX session, the connect name remains the same as the current VTX account name. The following sequence of events is an example:

1. Mary Smith tries to connect to SERVER_B from her VTX account named ADMIN::MSMITH on SERVER_A.
2. SERVER_B receives the connect name ADMIN::MSMITH.

If a subscriber is using the guest account on SERVER_A and tries to connect to SERVER_B, SERVER_A sends SERVER_B the subscriber's SERVER_A connect name. The following sequence of events is an example:

1. John Doe connects to SERVER_A from his VMS account on node MFG. SERVER_A receives a connect name of MFG::DOE. Because John Doe has no account on SERVER_A, he runs from SERVER_A's guest account. Thus, on SERVER_A his connect name is MFG::DOE and his account name is %GUEST%.
2. John Doe tries to connect to SERVER_B from SERVER_A. Because he is running under SERVER_A's guest account, SERVER_A sends his original connect name of MFG::DOE to SERVER_B.

1.7.4 Account Determination Algorithm

When it receives a connect request, a server uses the following algorithm to determine a VTX account that it can associate with the connect name. If the server trusts the connect request, it starts with step 1 of the algorithm. If the server does not trust the connect request, it starts with step 7.

1. If the connect name matches an account name in the account file (VTXACF.VTA), the server logs the subscriber in under the account name. For example, if the connect name is ADMIN::MSMITH, and there is a VTX account file entry of ADMIN::MSMITH, the subscriber is logged in to VTX as ADMIN::MSMITH.
2. If the connect name does not match an account name in the account file, the server searches for a matching cluster alias account name in the account file. For example, if the connect name is ADMIN::MSMITH, and there is a VTX account file entry of XYZ::MSMITH (where XYZ is the cluster alias for the nodename ADMIN), the subscriber is logged in to VTX as XYZ::MSMITH.
3. If the connect name does not match a full account name or a cluster alias account name in the account file, the server uses the node name from the connect name and tries to find a matching nodename::* entry in the account file. For example, the connect name ADMIN::MSMITH can be matched with the account file entry ADMIN::*.
4. If the connect name does not match a nodename::* entry in the account file, the server tries to find a matching cluster_alias::* entry in the account file. For example, if the node ADMIN is on a cluster that has a cluster alias name of XYZ, the connect name ADMIN::MSMITH can be matched with the account file entry XYZ::*.
5. If nodename::* and cluster_alias::* do not match an account name in the account file, the server uses the subscriber name from the connect name and tries to find a matching *::subscriber-name entry in the account file. For example, the connect name ADMIN::MSMITH can be matched with the account file entry *::MSMITH.
6. If the connect name does not match an account name, node name, or subscriber name in the account file, the server checks the file for a guest account.
7. If there is a guest account in the account file, the server logs the subscriber in under the guest account. The account is determined.
8. If there is no guest account in the account file, the server looks for a login form in the infobase. If no login form is found in the infobase, the server rejects the connect request.

9. If a login form is found in the infobase, the server sends the login form to the subscriber. The login form requests the subscriber to enter a VTX account name and password that have been assigned with the VTXACU Utility. When the subscriber sends back an account name and password, the server looks for a match in the account file.
10. If the subscriber enters an account name and password that match an entry in the account file, the server logs the subscriber in under the account name. The account is determined according to the login information.
11. If the subscriber enters an account name and password that do not have a match in the account file, the server rejects the connect request.

For information about implementing a login form, see the chapter on special forms and template pages in Part III of the *VAX VTX Information Provider's Guide*.

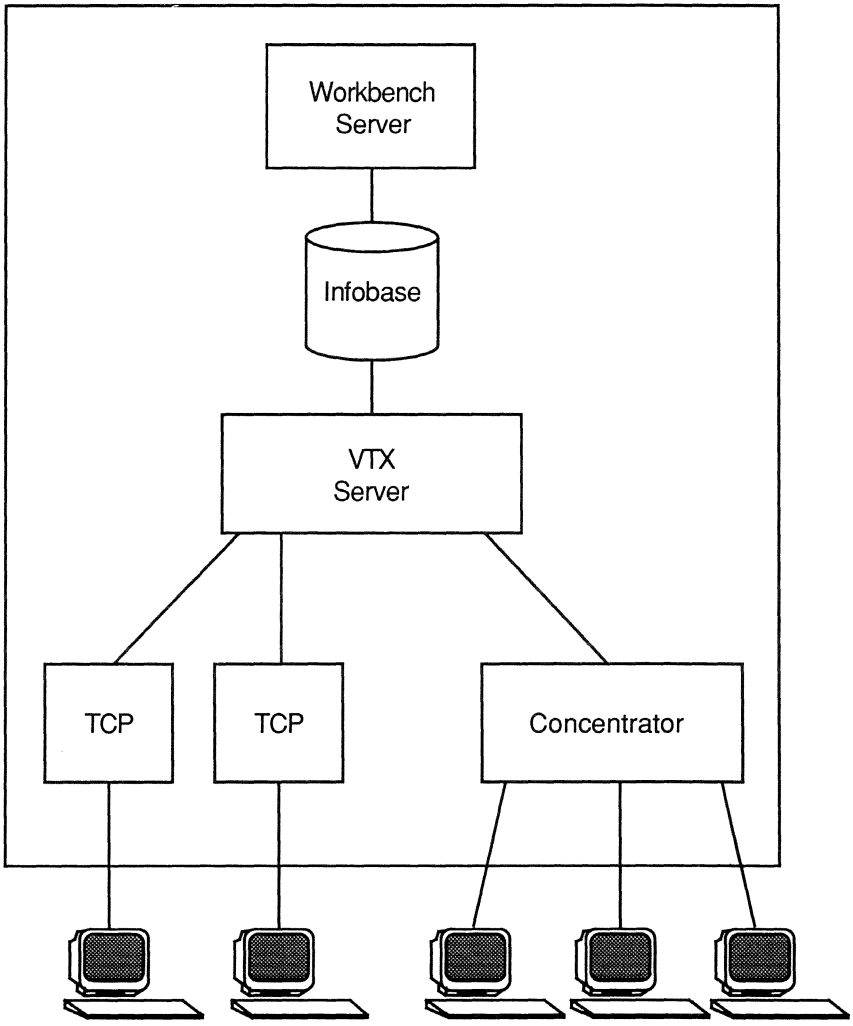
1.8 Sample VTX System Configurations

This section deals with some of the various ways to set up the components of a VTX system. Refer to this information for a better understanding of some of the tasks involved in managing VTX system communications.

VTX systems consist of VTX servers, terminal control programs, concentrators, update servers, Workbench servers, and infobases. The simplest VTX configuration is one in which all components reside on the same VAX computer.

In such a configuration, the concentrator and any terminal control programs connect to the server. Terminals connected to the concentrator are dedicated terminals. Figure 1–3 illustrates a basic VTX configuration.

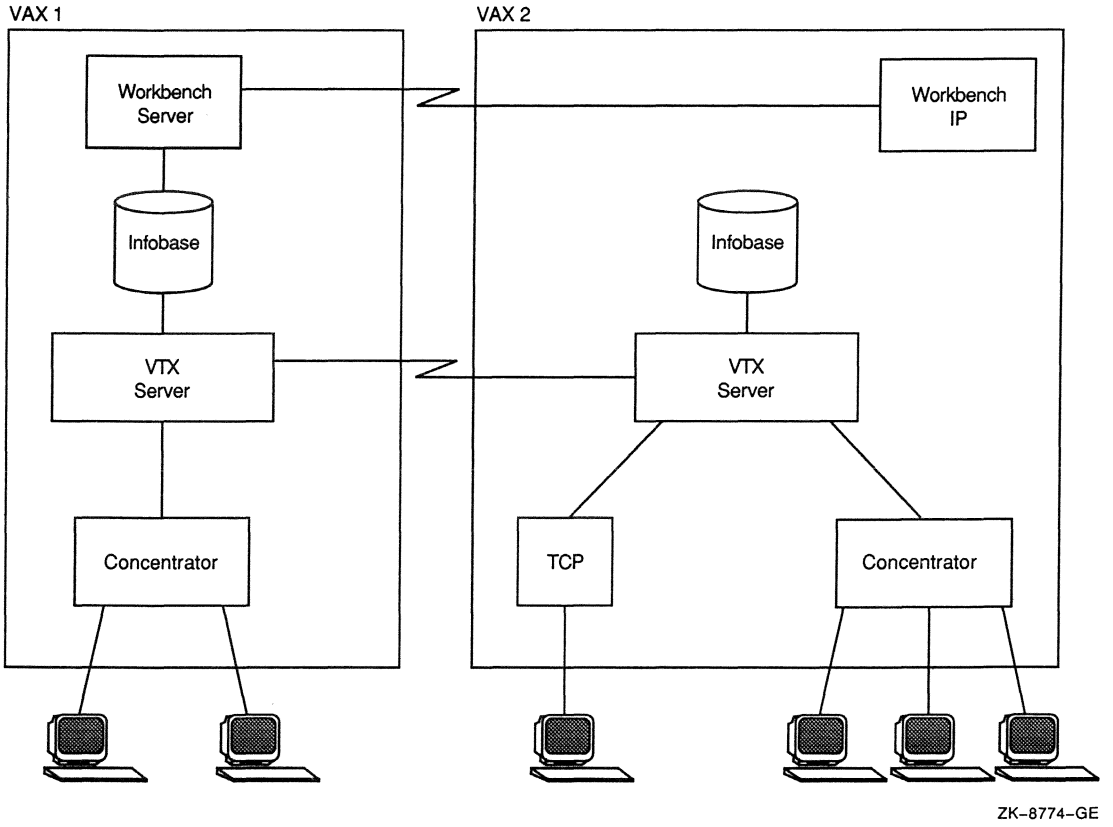
Figure 1–3: Basic VTX System Configuration



You can also configure a distributed VTX system. In a distributed configuration, a VAX computer contains a basic VTX configuration. The local server, however, connects not only to the local infobase but to one or more remote infobases through remote servers.

A distributed VTX system is best for applications that use distributed information. For example, a corporation that keeps its personnel information in Boston and its financial information in London needs a distributed system. With a distributed VTX system, the corporation can make both the personnel and financial information available to both sites as parts of the same virtual infobase. Figure 1–4 illustrates a simple distributed VTX configuration.

Figure 1–4: Distributed VTX System Configuration

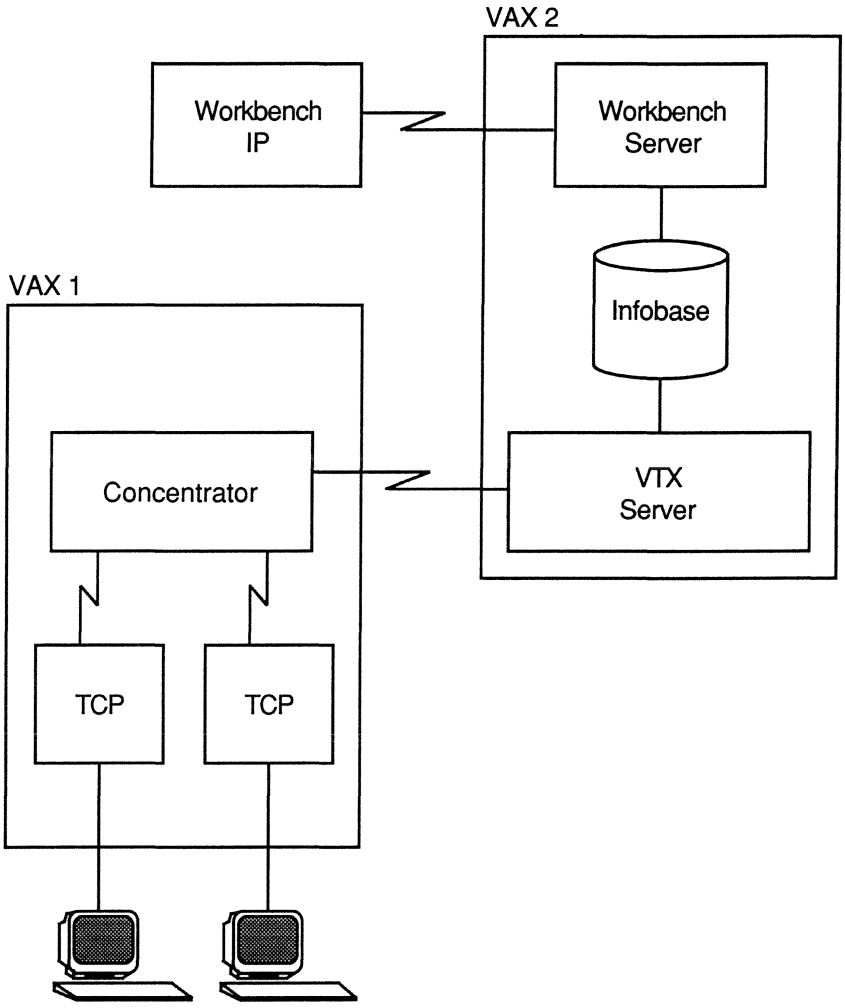


A variation of the distributed VTX configuration consists of a concentrator and one or more TCPs residing on one VAX computer, and the server, and infobase residing on another VAX computer. Such a configuration is useful

for a corporation that keeps all its information in a central location but wants to make the information available to a subsidiary site on a remote node of the network.

In such a configuration, terminal control programs at the remote site connect to the concentrator instead of to a VTX server. In turn, the concentrator connects to the remote VTX server. The terminals connected to the concentrator are not dedicated terminals. The advantage of this configuration is that it concentrates a large number of VTX sessions on a single DECnet link for more efficient use of system and network resources. Figure 1–5 illustrates this VTX configuration.

Figure 1–5: Concentrator Linked to Remote Server



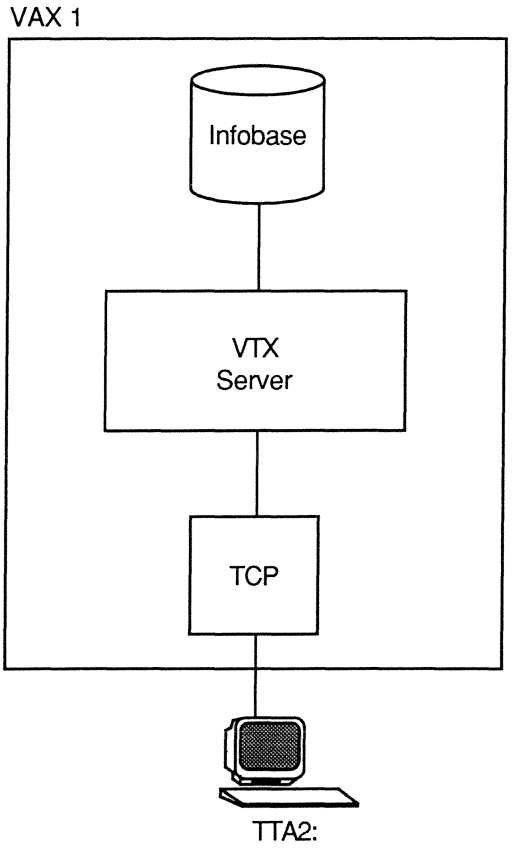
1.9 Local and Routed Sessions

You can configure a VAX VTX service in numerous ways, including many variations on the three configurations just described. Imagine, for example, a distributed VTX service with 10 infobases, one in each of 10 different locations throughout a country. Such a configuration could consist of 10 local VTX services, each on a different node in a computer network, each with its own VTX server. VAX VTX lets you make all these nodes, files, and servers appear to subscribers as a single infobase in a single VAX VTX service. If you wanted, you could set up the VAX VTX service so that a subscriber could sit at a terminal in any of the 10 sites and have the same view of the infobase, even though each site's infobase actually consists of a different combination of local and remote pages.

When a subscriber runs the terminal control program, a communication link to a VTX infobase server is established. Such a connection is either a local or a routed session.

A local session is established when a subscriber connects to the local VTX server. Figure 1–6 represents the components in a local session.

Figure 1–6: Local Session for Terminal TTA2:

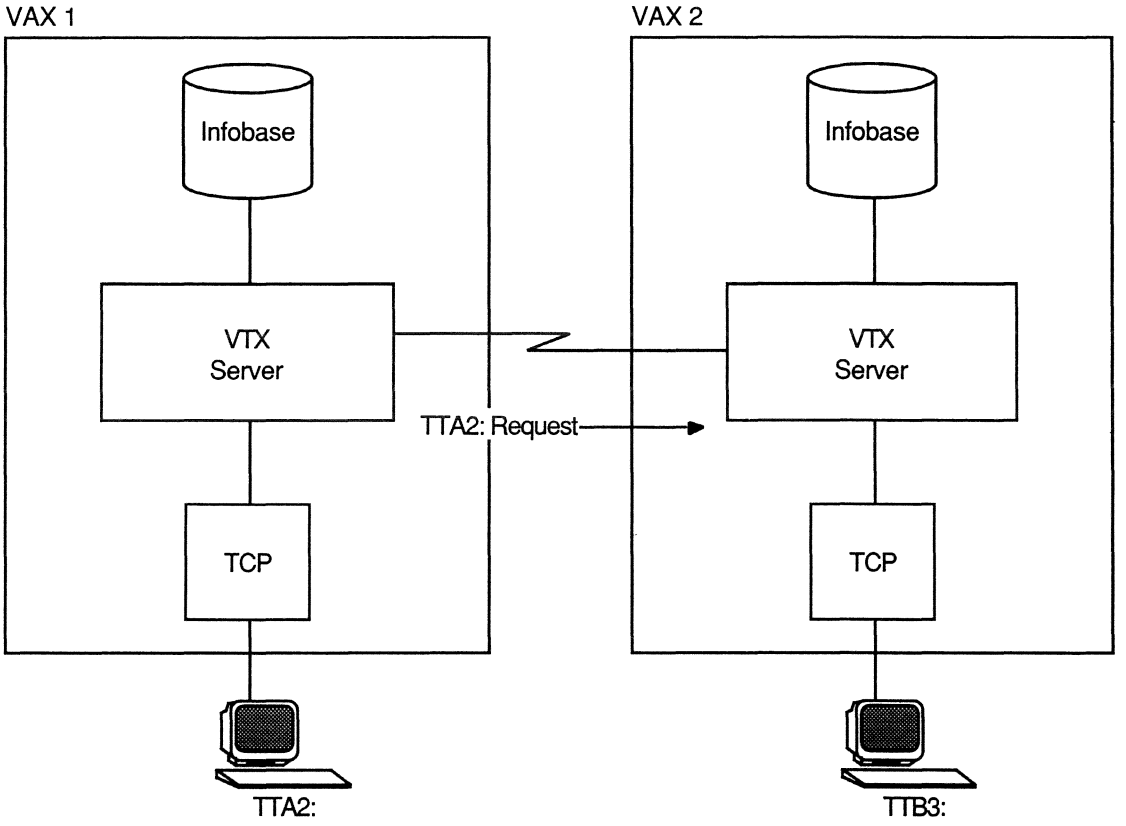


A routed session is established when a subscriber connects to a remote VTX server; that is, a server other than the local server on the local node. The connection is established through the local server. During a routed session, the local server simply passes messages (page requests and deliveries) between the terminal control program and the remote server. The remote server controls the session.

VTX subscribers do not need to see any distinction between a local session and a routed session. In fact, one of the advantages of VTX is its ability to offer both local and remote pages in a single "virtual" infobase. A routed session starts when the remote server takes the request from the local server.

Figure 1–7 represents the components of a routed session.

Figure 1–7: Routed Session for Terminal TTA2:



1.10 Using DECtalk

When subscribers access VTX using DECtalk through a concentrator, they can use the default DECtalk settings for their terminals. They can refer to the DECtalk documentation for explanations of these settings.

The VTX operator might find that different settings work better with the particular VTX configuration that the DECtalk subscribers are accessing. However, the HOST speed must always be set to the same speed as that of the DECtalk unit.

Chapter 2

VTX Control Utility

This chapter explains the tasks you must complete to manage VTX communications and describes the VTX Control (VTXCTL) Utility commands. The chapter also:

- Describes some preliminary VTX server, concentrator, update server, and VAX VTX Workbench server tasks to be completed before you can use the VTXCTL Utility
- Explains how to define logicals for the account file and the base page determination file
- Lists your responsibilities for the Workbench server
- Uses an example to illustrate a sample VTXCTL session
- Explains how to start the VTXCTL Utility

NOTE

The VTXCTL Utility is also used to control the VTX Application Service (VAS) run-time environment. If you are using VAS, see the *VAX VTX/VALU Guide to Using VAS* for a description of the VTXCTL commands used to control VAS.

2.1 Managing VTX Communications

You use the VTX Control Utility (VTXCTL) to configure a VTX system and to establish and monitor communications. Because VAX VTX lends itself to a variety of distributed configurations, you must carefully manage the communications aspect of your VAX VTX service, particularly if you have a distributed service. The VTXCTL Utility controls five types of processes:

- VTX servers

- Concentrators
- Update servers
- Workbench servers
- VAS run-time environment

To offer a VAX VTX service, you must have a VTX server process running under VMS and an infobase available to that server. Concentrators, update servers, and Workbench servers are optional. It is possible to have only a concentrator on a particular VMS system, but that concentrator must be connected to a VTX server and infobase on another node. The server's function is to transmit information, either requests or pages, between subscribers and the infobase.

The VTXCTL Utility has one main mode and five subsidiary modes, each with its own prompt:

- Control mode—CTL>

  Control mode lets you start and stop VTX server, concentrator, update server, and Workbench server processes, and lets you access the five subsidiary modes. When you start a process or connect to a process already running, the mode and prompt change if the operation is successful. When you stop a running process, you stay in control mode with the CTL> prompt. To perform an operation for a different process, you must exit from the current mode and connect to the desired mode.

- Server mode—SRV>

  Server mode lets you open and close VTX page and keyword files for subscriber access. You also use server mode to identify any remote servers and failover remote servers that are to be part of your VTX service so the local server will know how to get to them when they are referenced.

- Concentrator mode—CON>

  Concentrator mode lets you assign and deassign specified terminals and LAT ports to a concentrator so they can be used specifically for VTX.

- Update server mode—UPDSRV>

  Update server mode lets you open and close VTX page and keyword files for information provider access.

- Workbench server mode—WBSRV>

  Workbench server mode lets you open and close VTX page and keyword files and Workbench library files for Workbench information provider access.

- VAS mode—VAS>

  VAS mode lets you load VAS applications to be accessed by subscribers. It also allows you to start and stop remote applications as well as controlling logging functions. For more information on VAS mode and the VAS commands, see the *VAX VTX/VALU Guide to Using VAS*.

Each VTXCTL mode has its own commands. This chapter describes the commands for all modes except VAS mode.

2.2 Preliminary Tasks

Before you use the VTXCTL Utility, you must perform the following preliminary tasks:

- Setting privileges and quotas for the VTX server, update server, and Workbench server
- Verifying that certain files are located in the VTX server account
- Defining failover VTX servers
- Verifying that the value of CHANNELCNT is adequate
- Setting terminal port protection and assigning a timeout for terminals
- Defining logical names for the VTX account file and base page determination file

Certain privileges and quotas are also required for VTX subscriber and Workbench IP accounts. For more information on the preliminary tasks for these accounts, see Chapter 3 in this manual.

2.2.1 Preliminary Server Tasks

You must perform the following tasks before you start a VTX server:

- Set the necessary privileges and quotas.
- Verify that the necessary files are in the account where the server will run.
- Define the failover server logical names.
- Adjust the CHANNELCNT value according to subscriber activity, if necessary.

2.2.1.1 Privileges and Quotas

Certain default privileges and quotas must be set for the account where the server runs. To see what privileges and quotas are set, enter the following command at the DCL prompt:

```
$  SHOW PROCESS/PRIVILEGES/QUOTAS
```

The system manager must run the VMS Authorize Utility to set or change the default privileges and quotas. The required authorized and default privileges are:

GROUP
GRPNAM
NETMBX
SYSNAM
TMPMBX

The required quotas depend on the number of VTX sessions you expect to run on your system. A typical server with up to 100 users should have the following quotas:

AST limit (ASTLM)—240
Buffered I/O limit (BIOLM)—230
Direct I/O limit (DIOLM)—30
Enqueue limit (ENQLM)—20
Open file limit (FILLM)—120
Buffered I/O byte count limit (BYTLM)—65000
Page file quota (PGFLQUO)—8000

Use the formulas in Table 2–1 to determine required quotas for your system.

Table 2–1: Formulas to Determine Required Quotas

Quota	Formula
ASTLM	(number of DECnet links * 2) + number of files in the infobase + 30
BIOLM	(number of DECnet links * 2) + 30
DIOLM	(number of files open simultaneously * requests allowed) + 10

(continued on next page)

Table 2–1 (Cont.): Formulas to Determine Required Quotas

Quota	Formula
ENQLM[1]	(number of files open simultaneously * multibuffer count) + 10
FILLM	(number of files open simultaneously + number of DECnet links) + 5
BYTLM	65000
PGFLQUO	8000

[1]When calculating the ENQLM quota, you must include all currently open infobase files, including VTXACF.VTA, VTXSERVER.COM, VTXSRV_name.VTE, SYS$SYSTEM:VTXSRV.EXE, and VTXSRV.VTL.

2.2.1.2 Required Files

The following files must be available in the account where the server runs:

- VTXSERVER.COM
- VTXACF.VTA
- VTXBASE.TXT

The following files might also be required:

- VTXUPDSRV.COM (Required if running an update server)
- VTX$WBSRV.COM (Required if running a Workbench server)
- VTXCON.COM (Required if running a concentrator)

These files should have been copied during VTX installation. If they are not available, copy them using the following command at the DCL prompt:

```
$  COPY/LOG SYS$SYSROOT:[VTX$LIBRARY]VTX*.* SYS$LOGIN:*.*
```

Also, the LOGIN.COM file in the account where the server runs must not include any INQUIRE statements or SET PROCESS/NAME=xxx commands.

2.2.1.3 Failover Local Servers

VTX provides nine server logical names you can define at the system level so that subscribers can be automatically connected to another local server if their primary local server fails. The local server is the home server. The logical names are VTX$SERVER, VTX$SERVER02, VTX$SERVER03, VTX$SERVER04, VTX$SERVER05, VTX$SERVER06, VTX$SERVER07, VTX$SERVER08, and VTX$SERVER09. (There is no VTX$SERVER00 or

VTX$SERVER01.) Define your local server and the failover local server logicals in your system startup file as follows:

```
$ DEFINE/SYSTEM VTX$SERVER node::"""n="""
$ DEFINE/SYSTEM VTX$SERVER02 node::"""n="""
$ DEFINE/SYSTEM VTX$SERVER03 node::"""n="""
$ DEFINE/SYSTEM VTX$SERVER04 node::"""n="""
        .
        .
        .
```

Substitute a node name for the word *node* and a DECnet object number for the *n*. You do not have to enter the logical names in numerical order in your command file. However, you must not skip a logical name in the numerical sequence when defining them. VTX translates the logical names in numerical order. If the VTX server finds a failover logical that is not defined, it stops its search. For example, if you defined a primary local server and two failover local servers, VTX$SERVER02 and VTX$SERVER04, VTX would always stop its search after VTX$SERVER02 and never try to connect to VTX$SERVER04.

When you define logical names, the /SYSTEM qualifier makes a logical definition applicable system-wide, the /GROUP qualifier makes a logical definition applicable to all members of a specified UIC group, and no qualifier means that the logical definition applies only to the process that defined it.

2.2.1.4 Considerations for CHANNELCNT

If your VTX system has heavy activity, you might have to increase the SYSGEN parameter CHANNELCNT. Each time a DECnet link is established, a channel is allocated, and the number of available channels decreases. The default value of this parameter is 127. If you notice that subscribers are being denied access to VTX when in fact the system could handle more, try increasing the parameter value to 255. For additional information on examining and setting SYSGEN parameter values, see the *VAX VTX Installation Guide*.

2.2.2 Preliminary Concentrator Tasks

You must perform the following tasks before you start a concentrator:

- If you are assigning terminal ports to a concentrator, you must verify that the protection for those ports has been set to world access.
- If you are assigning LAT ports to a concentrator, you must first set up the LAT port characteristics and then create the LAT ports.

- You can set a timeout for terminals and LAT ports assigned to a VTX concentrator, if desired.

2.2.2.1 Protection for Terminal Ports

Before you assign terminal ports to a VTX concentrator, you must make sure the ports have their protection set for world read access. If you do not set the correct protection, VTX issues an error message when you try to assign ports to a concentrator.

To set protection on terminal ports, enter the following command at the DCL prompt:

```
$ SET PROTECTION=(W:R)/DEVICE port-name
```

You supply the appropriate port name, one for each command line.

2.2.2.2 LAT Support Tasks

LAT support is available on the following terminal servers:

- DECserver 200
- DECserver 500
- DECserver 550

There are two possible configurations for the physical ports on the DECserver that is to be used for LAT support:

- LAT port or ports dedicated to VTX
- LAT port or ports available for VTX and other LAT services

Before you assign LAT ports to a VTX concentrator, you must set up the LAT port characteristics for each DECserver port to be used and then create the ports in the LATCP utility. Both tasks require a privileged system account.

To enter privileged local mode of the DECserver software, specify the SET PRIVILEGE command and enter the password, as follows:

```
Local> SET PRIVILEGE
Password> password
```

To set the characteristics required for LAT support, issue the following SET commands (or, use the DEFINE command instead if you want the characteristics set permanently) from privileged local mode.

```
Local> SET PORT n ACCESS access-type
Local> SET PORT n INTERRUPTS ENABLED
Local> SET PORT n AUTOBAUD DISABLED
Local> SET PORT n INPUT SPEED 9600
Local> SET PORT n OUTPUT SPEED 9600
```

For the *n* parameter, specify the physical port on the DECserver.

For the *access-type* parameter, specify REMOTE if the port is to be dedicated to VTX, or DYNAMIC if users are to be permitted to break out of VTX.

Issue the five SET (or DEFINE) commands for each DECserver port to be used.

After setting up the LAT port characteristics, you must create the LAT ports in the LATCP utility so the ports can be assigned through the concentrator. To create the LAT ports, use a privileged account on the system running the VTX concentrator, and issue the following commands:

```
$  RUN SYS$SYSTEM:LATCP

LATCP>  CREATE PORT LTAn: /APPLICATION
LATCP>  SET PORT LTAn: /APPLICATION/NODE=lat-node/PORT=lat-port
```

Issue the CREATE and SET commands for each LAT port to be assigned through the concentrator.

The *n* parameter represents the number of the LTA device. You must specify a number that is not already in use. To determine what ports are already in use, issue the SHOW PORTS command at the LATCP> prompt.

The *lat-node* parameter represents the node name of the DECserver. To find out the name, issue the SHOW SERVER command in local mode on any of the DECserver ports.

The *lat-port* represents the name of the LAT port to be assigned. To find out the name, issue the SHOW PORT command in local mode at the port to be assigned on the DECserver.

To verify the devices you have created, issue the SHOW DEVICE LTA command at DCL level.

2.2.2.3 Timeout

You can set a timeout for terminal or LAT ports attached to a VTX server through a concentrator. This feature is particularly useful in such places as airport lobbies, where people will access a few pages and then leave the terminal.

To set the timeout, you use the DEFINE command at DCL level. The command sets the logical name VTX$PADWAIT to be a time value given in seconds. For example, the following command sets the timeout to be a minute and a half:

```
$ DEFINE/GROUP VTX$PADWAIT 90
```

This timeout feature usually causes the main VTX menu to be displayed after the specified period of time has elapsed. With the timeout feature set, the terminal screen will show the main menu again after the specified time has elapsed. Note that if the subscriber was using a form page or help page when the timeout occurs, VTX does a backup. After a second timeout, the main menu page appears on the screen.

2.2.3 Preliminary Update Server Tasks

The update server account needs the same privileges and quotas that are set for the server account, except that the quota for ENQLM should equal 1000. The system manager runs the VMS Authorize Utility to set or change the privileges and quotas. See Section 2.2.1 for more information.

2.2.4 Preliminary Workbench Server Tasks

The Workbench server account needs the same privileges and quotas that are set for the server account, except that the quota for ENQLM should equal 1000. The system manager runs the VMS Authorize Utility to set or change the privileges and quotas. See Section 2.2.1 for more information.

2.2.5 Defining Logical File Names

The VTX operator can define logical names for two VTX files:

- VTX$ACF for the account file (described in Chapter 3)
- VTX$BPDF for the base page determination file (described in Chapter 3)

You can define logicals for these files at DCL level using the DEFINE/GROUP command. Alternately, you can define the logicals in the VTXSERVER.COM, VTXUPDSRV.COM, or VTX$WBSRV.COM files, where the /GROUP qualifier is unnecessary.

2.2.5.1 Defining a Logical Name for the Account File

When a VTX server, update server, or Workbench server starts, one of its first tasks is to open its account file. The VTX server, update server, and Workbench server will look for the logical name VTX$ACF when they start up. If the logical name has been defined, it will be translated and the result of the translation will be used as the account file name.

The logical name can point to a string containing any valid portion of the account file specification. The default file specification SYS$LOGIN:VTXACF.VTA will be used to provide any fields not specified by the logical name translation. For example, if the logical name VTX$ACF translates to the file specification VTXACCOUNTS.VTA, the VTX server will try to open SYS$LOGIN:VTXACCOUNTS.VTA. If VTX$ACF translates to DISK$USER:[TEST]VTXACCOUNTS.VTA, the VTX server will try to open DISK$USER:[TEST]VTXACCOUNTS.VTA.

2.2.5.2 Defining a Logical Name for the Base Page Determination File

The logical name to define for the base page determination file is VTX$BPDF. The process of translating this logical is similar to that of translating VTX$ACF, except that only the VTX server and the Infobase Verification Utility (IVU) can open a base page determination file. The VTX server will use the default file specification SYS$LOGIN:VTXBASE.TXT to supply any file specification portions not specified by the logical name translation.

2.3 Workbench Server Considerations

The Workbench server manages distributed access to the Workbench library and the VTX infobase for Workbench IPs. When a Workbench IP uses the UPDATE operation to incorporate a menu structure into a VTX infobase, the Workbench server does the actual updating. When a Workbench IP modifies an existing infobase page, the Workbench server retrieves the pertinent page information and reserves that page exclusively for the IP.

The Workbench server is controlled by the VTXCTL Utility and can serve many Workbench IPs simultaneously, on both local and remote nodes.

Your responsibilities for the Workbench server include the following tasks:

- Starting the Workbench server

Using the VTXCTL Utility control mode, you start the Workbench server on the node where the Workbench server is located. (See the START WORKBENCH_SERVER command in the Control Mode section, Section 2.6.)

- Opening the Workbench library, a set of four files

  The Workbench library must be open so the Workbench server can perform infobase modifications for the IPs. (See the OPEN/LIBRARY command in the Workbench Server Mode section, Section 2.10.)

- Enabling DECnet communications with the Workbench server

  (See the START COMMUNICATION command in the Workbench Server Mode section, Section 2.10.)

- Opening VTX infobase files so the Workbench server can access them for Workbench IPs

  You create empty VTX page and keyword files using VTXUPD. The Workbench server and the infobase files it will update must reside on the same node. The infobase files should be open whenever the Workbench server is running. (See the OPEN commands in the Workbench Server Mode section, Section 2.10.)

  The infobase files should also be opened for shared access from server mode so that both subscribers and Workbench IPs can access the files' contents.

- Monitoring various types of Workbench system activity, such as IP sessions, communication links, and file access

  (See the SHOW commands in the Workbench Server Mode section, Section 2.10.)

- Shutting down the Workbench server as required

  (See the STOP commands in the Workbench Server Mode section, Section 2.10.)

2.4 VTXCTL Utility Flow

The series of commands in Example 2–1 illustrates a sample VTX operator session that uses the VTXCTL Utility and Workbench server mode commands. In the example, the VTX server is also started so the page and keyword files can be opened for shared access.

Example 2–1: Sample VTXCTL Workbench Server Mode Command Sequence

```
$ RUN SYS$SYSTEM:VTXCTL

CTL> START SERVER
...Working...

SRV> START COMMUNICATION
SRV> OPEN/PAGE/SHARE MAINPAGE
SRV> OPEN/KEYWORD/SHARE MAINKEY
SRV> EXIT

CTL> START WORKBENCH_SERVER
...Working...

WBSRV> START COMMUNICATION
WBSRV> SHOW COMMUNICATION

                  Workbench Server is DECnet object number 56

%VTX-I-NOLINKFOU, no communications links found
WBSRV> OPEN/PAGE MAINPAGE
WBSRV> OPEN/KEYWORD MAINKEY
WBSRV> SHOW FILE/ALL

 Sec Type    Low Key         High Key                  File Name
---- ---- -------------- -------------- ------------------------------------
   2 Key  0              9               NODE1:[SAMPLE]MAINKEY.VTK;1
          Kwds  inserted = 0,          deleted = 0

   1 Page 0              9               NODE1:[SAMPLE]MAINPAGE.VTD;1
          Pages created  = 0,          deleted = 0,        modified = 0

2 open infobase sections

WBSRV> OPEN/LIBRARY
WBSRV> SHOW LIBRARY
Workbench server library directory is NODE1:[SAMPLE]
WBSRV> EXIT

CTL> SHOW WORKBENCH_SERVER
VTX Workbench server process running:

        VTX$WBSRV

CTL> CONNECT WORKBENCH_SERVER

WBSRV> STOP COMMUNICATION
WBSRV> EXIT

CTL> STOP SERVER
...Working...
CTL> STOP WORKBENCH_SERVER
...Working...
CTL> EXIT
$
```

2.5 Starting the VTXCTL Utility

To start the VTXCTL Utility, enter the following command at the DCL prompt:

```
$ RUN SYS$SYSTEM:VTXCTL
```

After the command is executed, your terminal displays the following:

```
                VAX VTX Control Program V4.0

CTL>
```

The CTL> prompt indicates that you have started VTXCTL and are in control mode.

2.6 Control Mode

After you start the VTXCTL Utility and the CTL> prompt is displayed, you are in control mode. At the CTL> prompt, you use control mode commands to control the VTX server, concentrator, update server, and Workbench server processes, and to access the four corresponding VTXCTL subsidiary modes.

Table 2–2 summarizes the control mode commands.

Table 2–2: VTXCTL Utility—Control Mode Commands

Command	Description
CONNECT CONCENTRATOR	Reestablishes communication between the VTXCTL Utility and a previously started concentrator process.
CONNECT SERVER	Reestablishes communication between the VTXCTL Utility and a previously started server process.
CONNECT UPDATE_SERVER	Reestablishes communication between the VTXCTL Utility and a previously started update server process.
CONNECT WORKBENCH_SERVER	Reestablishes communication between the VTXCTL Utility and a previously started Workbench server process.

(continued on next page)

Table 2–2 (Cont.): VTXCTL Utility—Control Mode Commands

Command	Description
EXIT	Exits from the VTXCTL Utility.
HELP	Accesses online help information about control mode commands.
SHOW CONCENTRATOR	Displays information about a concentrator process.
SHOW SERVER	Displays information about a server process.
SHOW UPDATE_SERVER	Displays information about an update server process.
SHOW WORKBENCH_SERVER	Displays information about a Workbench server process.
START CONCENTRATOR	Starts the VTX detached concentrator process, placing you in concentrator mode so you can issue commands to the concentrator.
START SERVER	Starts the VTX detached server process, placing you in server mode so you can issue commands to the server.
START UPDATE_SERVER	Starts the VTX detached update server process, placing you in update server mode so you can issue commands to the update server.
START WORKBENCH_SERVER	Starts the VTX detached Workbench server process, placing you in Workbench server mode so you can issue commands to the Workbench server.
STOP CONCENTRATOR	Stops a concentrator process.
STOP SERVER	Stops a server process.
STOP UPDATE_SERVER	Stops an update server process.
STOP WORKBENCH_SERVER	Stops a Workbench server process.

CONNECT CONCENTRATOR

Reestablishes communication between the VTXCTL Utility and a previously started concentrator process.

Format

CONNECT CONCENTRATOR *[/NAME=concentrator-name]*

Qualifier

/NAME=concentrator-name
Specifies the name given to the concentrator process when it was started. If you specified a name with the START CONCENTRATOR command, you must use this qualifier.

Description

The CONNECT CONCENTRATOR command reestablishes communication between the VTXCTL Utility and a previously started concentrator, placing you in concentrator mode at the CON> prompt.

Example

The following example starts a concentrator process naming it VTXCON_LOBBY, initiates communication with that concentrator, and exits to DCL level. Later on it invokes the VTXCTL Utility and reestablishes communication with the previously started concentrator.

```
CTL>  START CONCENTRATOR/NAME=LOBBY

CON>  START COMMUNICATION
CON>  EXIT

CTL>  EXIT

$
   .
   .
   .
$  RUN SYS$SYSTEM:VTXCTL
         VAX VTX Control Program V4.0

CTL>  CONNECT CONCENTRATOR/NAME=LOBBY

CON>
```

CONNECT SERVER

Reestablishes communication between the VTXCTL Utility and a previously started server process.

Format

CONNECT SERVER *[/NAME=server-name]*

Qualifier

/NAME=server-name
Specifies the name given to the server process when it was started. If you specified a name with the START SERVER command, you must use this qualifier.

Description

The CONNECT SERVER command reestablishes communication between the VTXCTL Utility and a previously started VTX server, placing you in server mode at the SRV> prompt.

Example

The following example starts a VTX server process naming it VTXSRV_ALPHA, initiates communication with that server, and exits to DCL level. Later on it invokes the VTXCTL Utility and reestablishes communication with the previously started server.

```
CTL>  START SERVER/NAME=ALPHA

SRV> START COMMUNICATION
SRV> EXIT

CTL>  EXIT

$
   .
   .
   .
$ RUN SYS$SYSTEM:VTXCTL

          VAX VTX Control Program V4.0

CTL> CONNECT SERVER/NAME=ALPHA

SRV>
```

CONNECT UPDATE_SERVER

Reestablishes communication between the VTXCTL Utility and a previously started update server process.

Format

CONNECT UPDATE_SERVER *[/NAME=update-server-name]*

Qualifier

/NAME=update-server-name
Specifies the name given to the update server process when it was started. If you specified a name with the START UPDATE_SERVER command, you must use this qualifier.

Description

The CONNECT UPDATE_SERVER command reestablishes communication between the VTXCTL Utility and a previously started update server, placing you in update server mode at the UPDSRV> prompt.

Example

The following example starts a VTX update server process, naming it VTXUPDSRV_NEWS, initiates communication with that update server, and exits to DCL level. Later on it invokes the VTXCTL Utility and reestablishes communication with the previously started update server.

```
CTL>  START UPDATE_SERVER/NAME=NEWS

UPDSRV>  START COMMUNICATION
UPDSRV>  EXIT

CTL>  EXIT

$
   .
   .
   .
$  RUN SYS$SYSTEM:VTXCTL
          VAX VTX Control Program V4.0

CTL>  CONNECT UPDATE_SERVER/NAME=NEWS

UPDSRV>
```

CONNECT WORKBENCH_SERVER

Reestablishes communication between the VTXCTL Utility and a previously started Workbench server process.

Format

CONNECT WORKBENCH_SERVER *[/NAME= workbench-server-name]*

Qualifier

/NAME=workbench-server-name
Specifies the name given to the Workbench server process when it was started. If you specified a name with the START WORKBENCH_SERVER command, you must use this qualifier.

Description

The CONNECT WORKBENCH_SERVER command reestablishes communication between the VTXCTL Utility and a previously started Workbench server, placing you in Workbench server mode at the WBSRV> prompt.

Example

The following example first starts a Workbench server process, naming it VTX$WBSRV_ALPHA, initiates communication with that Workbench server, and exits to DCL level. Later on it invokes the VTXCTL Utility and reestablishes communication with the previously started Workbench server.

```
CTL>  START WORKBENCH_SERVER/NAME=ALPHA

WBSRV>  START COMMUNICATION
WBSRV>  EXIT

CTL>  EXIT

$
   .
   .
   .
$  RUN SYS$SYSTEM:VTXCTL
          VAX VTX Control Program V4.0

CTL>  CONNECT WORKBENCH_SERVER/NAME=ALPHA

WBSRV>
```

EXIT

Lets you exit from the VTXCTL Utility.

Format

EXIT

Description

The EXIT command lets you finish your work in the VTXCTL Utility and returns you to DCL level.

Example

The following example completes the current session with the VTXCTL Utility and returns you to the DCL prompt.

```
CTL> EXIT
$
```

HELP

Lets you get help information for any control mode command.

Format

HELP *[topic]*

Parameter

topic
One of a number of topics that help is available for. If you specify a topic, you will get a help display related to that topic. If you do not specify a topic, you will get a list of topics that help is available for.

Description

The HELP command lets you get help information for control mode commands. The help available is similar to VMS help. You can ask for general help, or you can ask for help on specific topics and subtopics.

SHOW CONCENTRATOR

Displays a list of all concentrator processes currently running under your VMS group UIC.

Format

SHOW CONCENTRATOR

Description

The SHOW CONCENTRATOR command lists all the concentrator processes currently running under your VMS group UIC.

Example

In the following example, VTXCTL displays two concentrator processes running under the same group UIC.

```
CTL>  SHOW CONCENTRATOR
VTX concentrator processes running:

        VTXCON
        VTXCON_LOBBY
CTL>
```

SHOW SERVER

Displays a list of all VTX server processes currently running under your VMS group UIC.

Format

SHOW SERVER

Description

The SHOW SERVER command lists all the VTX server processes currently running under your VMS group UIC.

Example

In the following example, VTXCTL displays two server processes running under the same VMS group UIC.

```
CTL> SHOW SERVER
VTX server processes running:

        VTXSRV
        VTXSRV_ALPHA
CTL>
```

SHOW UPDATE_SERVER

Displays a list of all update server processes currently running under your VMS group UIC.

Format

SHOW UPDATE_SERVER

Description

The SHOW UPDATE_SERVER command lists all the update server processes currently running under your VMS group UIC.

Example

In the following example, VTXCTL displays two update server processes running under the same group UIC.

```
CTL>  SHOW UPDATE_SERVER
VTX update server process running:

        VTXUPDSRV
        VTXUPDSRV_NEWS
CTL>
```

SHOW WORKBENCH_SERVER

Displays a list of all Workbench server processes currently running under your VMS group UIC.

Format

SHOW WORKBENCH_SERVER

Description

The SHOW WORKBENCH_SERVER command lists all the Workbench server processes currently running under your VMS group UIC.

Example

The following example causes a display of three Workbench server processes running under the same group UIC.

```
CTL>  SHOW WORKBENCH_SERVER
VTX Workbench server process running:

        VTX$WBSRV_ALPHA
        VTX$WBSRV_NEWS
        VTX$WBSRV_MOVIE
CTL>
```

START CONCENTRATOR

Starts the concentrator as a detached process.

Format

START CONCENTRATOR *[/NAME=concentrator-name] [/MAXSESS=n]*

Qualifiers

/NAME=concentrator-name
Specifies a concentrator name. The name can be any string of up to five characters. The name you specify is appended to the default process name VTXCON. For example, if you specify a name of BETA for a concentrator process, the concentrator process name is VTXCON_BETA. The concentrator's error log file takes the same name and a file type of VTE. For example, a concentrator process named VTXCON_BETA has an error log file named VTXCON_BETA.VTE.

The /NAME qualifier is required if you are starting more than one server from the same account or from different accounts sharing the same group UIC.

/MAXSESS=n
Specifies the maximum number of expected sessions. The maximum number of supported sessions is 65535. The default value is 100 sessions. When the maximum number of sessions has been reached, the concentrator rejects subsequent connect requests. The value you specify with the /MAXSESS qualifier is also used to calculate certain quotas and limits for the detached concentrator process. Setting this value abnormally high might cause the detached process creation to fail because of insufficient quotas. For more information on quotas, see Section 2.2.2.

Description

The START CONCENTRATOR command starts the concentrator as a detached process, placing you in concentrator mode at the CON> prompt. No terminal ports are assigned to the concentrator at this point. The concentrator becomes the target process as a result of this command.

When you configure a VTX system, you will generally have at least a VTX server and an infobase. Concentrators are optional. In a remote configuration, it is possible to have only a concentrator on a particular VMS system, but that concentrator must be connected to a server and infobase on another node.

If a concentrator process has already been started, you must issue the CONNECT CONCENTRATOR command to access concentrator mode for that process.

A concentrator starts with the execution of the command procedure VTXCON.COM, which must be in SYS$LOGIN, your top-level directory. To start a concentrator, you must be logged in to an account whose logical name, SYS$LOGIN, points to the directory where this file is located.

If you have a problem starting a concentrator, after a two-minute timeout period VTXCTL will instruct you to look in the concentrator's error log file. This file contains information about why the concentrator could not be started. Note that the format for this file is sequential VFC (variable with fixed length control). If you attempt to edit the file, the editor might display a message that this is not a standard text file.

Example

The following example starts a VTX concentrator as a detached process.

```
CTL> START CONCENTRATOR

CON>
```

START SERVER

Starts the VTX server as a detached process.

Format

START SERVER *[/NAME=server-name]*
[/MAXSESS=n]

Qualifiers

/NAME=server-name
Specifies a server name. The name can be any string of up to five characters. The name you specify is appended to the default process name VTXSRV. For example, if you specify a name of ALPHA for a server process, the server process name is VTXSRV_ALPHA. The server's error log file will be assigned the same name and a file type of VTE. For example, a server process named VTXSRV_ALPHA has an error log file named VTXSRV_ALPHA.VTE.

The /NAME qualifier is required if you are starting more than one server from the same account or from different accounts sharing the same group UIC.

/MAXSESS=n
Specifies the maximum number of expected sessions. The maximum number of supported sessions is 65535. The default value is 100 sessions. When the maximum number of sessions has been reached, the server rejects subsequent connect requests. The value you specify with the /MAXSESS qualifier is also used to calculate certain quotas and limits for the detached server process. Setting this value abnormally high might cause the detached process creation to fail because of insufficient quotas. For more information on quotas, see Section 2.2.1.

Description

The START SERVER command starts the VTX server, placing you in server mode at the SRV> prompt. No infobase files are open to the server at this point.

The VTX server's function is to transmit information, either requests or pages, between subscribers and the infobase. Starting the server process should be one of the first routine VTX tasks you perform whenever the VMS system is rebooted. You will also need to start the server if the rest of the VTX system is up, but for some reason the server is not already running.

You start the server as a detached process and let it run. A detached process is started by another process and is able to continue running even after the originating process has been terminated. In the case of the server, the originating process is the VTXCTL program, which you can terminate as soon as you have your VTX service up and running for the day.

If a server process has already been started, you must issue the CONNECT SERVER command to access server mode for that server process.

The server starts with the execution of the command procedure VTXSERVER.COM, which must be in SYS$LOGIN, your top-level directory. To start a server, you must be logged in to an account whose logical name, SYS$LOGIN, points to the directory where this file is located.

You can start more than one server by using the /NAME qualifier to name each server process. For each server process, you can also specify a different account control file (ACF) and base page determination file (BPDF). The VTXSERVER.COM file specifies the default ACF and BPDF files. To use a different ACF or BPDF for a server process, you must edit the VTXSERVER.COM file and specify the files for the named server process. The default ACF and BPDF files are used if you issue the START SERVER command without the /NAME qualifier or with the /NAME qualifier and a server process name not identified in the VTXSERVER.COM file.

The logical name for the VTX server is VTX$SERVER. You should define this logical name on a system-wide basis so subscribers can access the VTX server. You can also define up to eight failover server logical names. If subscribers cannot access the primary VTX server, they are automatically connected to the first available failover server.

If you have a problem starting a server, after a two-minute timeout period VTXCTL will instruct you to look in the server's error log file. This file contains information about why the server could not be started. Note that the format for this file is sequential VFC (variable with fixed length control). If you attempt to edit the file, the editor might display a message that this is not a standard text file.

Example

The following example starts a VTX server as a detached process and specifies a limit of 250 simultaneous sessions for the process. The command specifies the name BETA for the server process.

```
CTL>  START SERVER/NAME=BETA/MAXSESS=250

SRV>
```

START UPDATE_SERVER

Starts the update server as a detached process.

Format

START UPDATE_SERVER *[/NAME=update-server-name] [/MAXSESS=n]*

Qualifiers

/NAME=update-server-name
Specifies an update server name. The name can be any string of up to five characters. The name you specify is appended to the default process name VTXUPDSRV. For example, if you specify a name of GAMMA for an update server process, the update server process name is VTXUPDSRV_GAMMA. The update server's error log file will be assigned the same name and a file type of VTE. For example, an update server process named VTXUPDSRV_GAMMA has an error log file named VTXUPDSRV_GAMMA.VTE.

The /NAME qualifier is required if you are starting more than one server from the same account or from different accounts sharing the same group UIC.

/MAXSESS=n
Specifies the maximum number of expected sessions. The maximum number of supported sessions is 65535. The default value is 10 sessions. When the maximum number of sessions has been reached, the update server rejects subsequent connect requests. The value you specify with the /MAXSESS qualifier is also used to calculate certain quotas and limits for the detached update server process. Setting this value abnormally high might cause the detached process creation to fail because of insufficient quotas. For more information on quotas, see Section 2.2.3.

Description

The START UPDATE_SERVER command starts the update server as a detached process, placing you in update server mode at the UPDSRV> prompt. Once the update server has been started, information providers can use the VTX Update Utility (VTXUPD) to access the infobase for modification.

When you configure a VTX system, you will generally have at least a VTX server and an infobase. An update server is optional. An update server is needed whenever you have information providers on other systems doing updates on your local infobase.

If an update server process has already been started, you must issue the CONNECT UPDATE_SERVER command to access update server mode for that process.

The update server starts with the execution of the command procedure VTXUPDSRV.COM, which must be in SYS$LOGIN, your top-level directory. To start an update server, you must be logged in to an account whose logical name, SYS$LOGIN, points to the directory where this file is located.

The logical name for the update server is VTX$UPDSRV. You should define this logical name on a system-wide basis so that information providers can access the update server.

If you have a problem starting an update server, after a two-minute timeout period VTXCTL will instruct you to look in the update server's error log file. This file contains information about why the update server could not be started. Note that the format for this file is sequential VFC (variable with fixed length control). If you attempt to edit the file, the editor might display a message that this is not a standard text file.

Example

The following example starts a VTX update server named A (VTXUPDSRV_A) as a detached process.

```
CTL> START UPDATE_SERVER/NAME=A

UPDSRV>
```

START WORKBENCH_SERVER

Starts the Workbench server as a detached process.

Format

START WORKBENCH_SERVER *[/NAME=server-name]*
[/MAXSESS=n]

Qualifiers

/NAME=server-name
Specifies a Workbench server name. The name can be any string of up to five characters. The name you specify is appended to the default process name VTX$WBSRV. For example, if you specify a name of BETA for a Workbench server process, the Workbench server process name is VTX$WBSRV_BETA. The Workbench server's error log file will be assigned the same name and a file type of VTE. For example, a Workbench server process named VTX$WBSRV_BETA has an error log file named VTX$WBSRV_BETA.VTE.

The /NAME qualifier is required if you are starting more than one server from the same account or from different accounts sharing the same group UIC.

/MAXSESS=n
Specifies the maximum number of expected sessions. The maximum number of supported sessions is 65535. The default value is 25 sessions. When the maximum number of sessions has been reached, the Workbench server rejects subsequent connect requests. The value you specify with the /MAXSESS qualifier is also used to calculate certain quotas and limits for the detached Workbench server process. Setting this value abnormally high might cause the detached process creation to fail because of insufficient quotas. For more information on quotas, see Section 2.2.4.

Description

The START WORKBENCH_SERVER command starts the Workbench server as a detached process, placing you in Workbench server mode at the WBSRV> prompt. Once the Workbench server has been started, information providers can use the Workbench Utility to create and maintain the VTX infobase.

If information providers at your site use the Workbench Utility, you will need to start a Workbench server as part of your VTX startup procedure.

If a Workbench server process has already been started, you must issue the CONNECT WORKBENCH_SERVER command to access Workbench server mode for that process.

The Workbench server starts with the execution of the command procedure VTX$WBSRV.COM, which must be in SYS$LOGIN, your top-level directory. To start a Workbench server, you must be logged in to an account whose logical name, SYS$LOGIN, points to the directory where this file is located.

The logical name for the Workbench server is VTX$WB_SERVER. You should define this logical name on a system-wide basis so that the Workbench IPs running the Workbench Utility can access the Workbench server.

If you have a problem starting a Workbench server, after a two-minute timeout period VTXCTL will instruct you to look in the Workbench server's error log file. This file contains information about why the Workbench server could not be started. Note that the format for this file is sequential VFC (variable with fixed length control). If you attempt to edit the file, the editor might display a message that this is not a standard text file.

Example

The following example starts a Workbench server as a detached process and names the process ALPHA. The full name of the Workbench server's process will be VTX$WBSRV_ALPHA. The name of the associated log file will be VTX$WBSRV_ALPHA.VTE.

```
CTL> START WORKBENCH_SERVER/NAME=ALPHA

WBSRV>
```

STOP CONCENTRATOR

Stops a concentrator.

Format

STOP CONCENTRATOR *[{/ALL | /NAME=concentrator-name}]*

Qualifiers

/ALL
Specifies that all concentrator processes running under your VMS group UIC are to be stopped. If you use the /ALL qualifier, you cannot specify a concentrator name.

/NAME=concentrator-name
Specifies the name given to the concentrator process when it was started. If you specified a name with the START CONCENTRATOR command, you must use this qualifier. If you specify a concentrator name, you cannot use the /ALL qualifier.

Description

The STOP CONCENTRATOR command stops one or all concentrators. All communication links currently associated with the concentrator or concentrators are broken, and all terminal ports currently assigned to the concentrator or concentrators are deassigned.

Issue this command without a qualifier to stop the default concentrator process VTXCON. Include the /NAME qualifier to stop the specified concentrator process that you named when you started it. Specify the /ALL qualifier to stop all concentrator processes running under your VMS group UIC. The /NAME and /ALL qualifiers are mutually exclusive.

Example

The following example stops the default concentrator process VTXCON.

```
CTL> STOP CONCENTRATOR
CTL>
```

STOP SERVER

Stops a VTX server.

Format

STOP SERVER *[{/ALL | /NAME=server-name}]*

Qualifiers

/ALL
Specifies that all VTX server processes running under your VMS group UIC are to be stopped. If you use the /ALL qualifier, you cannot specify a server name.

/NAME=server-name
Specifies the name given to the server process when it was started. If you specified a name with the START SERVER command, you must use this qualifier. If you specify a server name, you cannot use the /ALL qualifier.

Description

The STOP SERVER command stops one or all VTX servers. All communication links associated with the server or servers are broken, and all files currently open to the server or servers are closed.

Issue this command without a qualifier to stop the default server process VTXSRV. Include the /NAME qualifier to stop the specified server process that you named when you started it. Specify the /ALL qualifier to stop all server processes running under your VMS group UIC. The /NAME and /ALL qualifiers are mutually exclusive.

Example

The following example stops the server process named ALPHA.

```
CTL>  STOP SERVER/NAME=ALPHA
CTL>
```

STOP UPDATE_SERVER

Stops an update server process.

Format

STOP UPDATE_SERVER *[{/ALL | /NAME=update-server-name}]*

Qualifiers

/ALL
Specifies that all update server processes running under your VMS group UIC are to be stopped. If you use the /ALL qualifier, you cannot specify an update server name.

/NAME=update-server-name
Specifies the name given to the update server process when it was started. If you specified a name with the START UPDATE_SERVER command, you must use this qualifier. If you specify an update server name, you cannot use the /ALL qualifier.

Description

The STOP UPDATE_SERVER command stops one or all update server processes. All communication links currently associated with the update server or servers are broken, and all files currently open to the update server or servers are closed.

Issue this command without a qualifier to stop the default update server process VTXUPDSRV. Include the /NAME qualifier to stop the specified update server process that you named when you started it. Specify the /ALL qualifier to stop all update server processes running under your VMS group UIC. The /NAME and /ALL qualifiers are mutually exclusive.

Example

The following example stops the update server process named FIVE.

```
CTL> STOP UPDATE_SERVER/NAME=FIVE
CTL>
```

STOP WORKBENCH_SERVER

Stops a Workbench server process.

Format

STOP WORKBENCH_SERVER *[{/ALL |*
/NAME=workbench-server-name}]

Qualifiers

/ALL
Specifies that all Workbench server processes running under your VMS group UIC are to be stopped. If you use the /ALL qualifier, you cannot specify a Workbench server name.

/NAME=workbench-server-name
Specifies the name given to the Workbench server process when it was started. If you specified a name with the START WORKBENCH_SERVER command, you must use this qualifier. If you specify a Workbench server name, you cannot use the /ALL qualifier.

Description

The STOP WORKBENCH_SERVER command stops one or all Workbench server processes. All communication links currently associated with the Workbench server or servers are broken, and all files currently open to the Workbench server or servers are closed.

Issue this command without a qualifier to stop the default Workbench server process VTX$WBSRV. Include the /NAME qualifier to stop the specified Workbench server process that you named when you started it. Specify the /ALL qualifier to stop all Workbench server processes running under your VMS group UIC. The /NAME and /ALL qualifiers are mutually exclusive.

Example

The following example stops the default Workbench server process VTX$WBSRV.

```
CTL>  STOP WORKBENCH_SERVER
CTL>
```

2.7 Server Mode

From control mode, there are two ways to access server mode:

- If you do not have a server running under your group UIC, issue the START SERVER command.
- If you have a server running under your group UIC, issue the CONNECT SERVER command.

You use server mode commands at the SRV> prompt to handle various communication aspects that involve the VTX server. Table 2–3 summarizes the commands used in server mode.

VTX servers perform the following functions:

- Provide the link between terminals and infobases, as well as between concentrators and infobases
- Let you allow communication with remote processes
- Manage page and keyword files
- Load the base page determination file

Table 2–3: VTXCTL Utility—Server Mode Commands

Command	Description
CLOSE/ALL	Closes all open VTX page and keyword files.
CLOSE/KEYWORD	Closes a keyword file.
CLOSE/PAGE	Closes a page file.
EXIT	Exits from VTX server mode.
HELP	Accesses online help information about server mode commands.
LOAD BASE	Reloads the base page determination file contents into the server's memory.
OPEN/KEYWORD	Opens a VTX keyword file for subscriber access.
OPEN/PAGE	Opens a VTX page file for subscriber access.
REMOTE	Declares a remote process and assigns it to a remote server or application.
SHOW COMMUNICATION	Displays information about communication links.

(continued on next page)

Table 2–3 (Cont.): VTXCTL Utility—Server Mode Commands

Command	Description
SHOW FILE	Displays information about infobase files.
SHOW REMOTE	Displays information about remote processes.
SHOW SESSION	Displays information about current sessions.
START COMMUNICATION	Establishes the VTX server as a DECnet object.
START LOG	Initiates logging of session logins and logouts.
STOP COMMUNICATION	Stops the server from accepting incoming communication requests.
STOP LOG	Stops server logging.
STOP SESSION	Stops active server sessions.

CLOSE/ALL

Closes all VTX page and keyword files currently open to the VTX server.

Format

CLOSE/ALL

Description

The CLOSE/ALL command closes all VTX page and keyword files currently open to the VTX server.

Example

The following example closes all infobase files (keyword and page files) currently open to the server. Notice that each file is referred to as a *section* of the infobase.

```
SRV> CLOSE/ALL
%VTX-I-DBSECCLO, 2 infobase sections closed
SRV>
```

CLOSE/KEYWORD

Closes a VTX keyword file to the server.

Format

CLOSE/KEYWORD *filename*

Parameter

filename
The name of the keyword file to be closed. The file name or logical name you supply must be the same file name you specified when you opened the file. You are not required to specify the VTK file type. If you included a directory specification for the file in the OPEN command, you must also include it in the CLOSE command.

If you are unsure of the file name to use, issue the SHOW FILE/ALL command beforehand to see which files are open.

Description

The CLOSE/KEYWORD command closes a VTX keyword file to the server.

Example

The following example closes the keyword file SALES.VTK for subscriber access.

```
SRV>  CLOSE SALES.VTK
SRV>
```

CLOSE/PAGE

Closes a VTX page file to the server.

Format

CLOSE/PAGE *filename*

Parameter

filename
The name of the page file to be closed. The file name or logical name you supply must be the same name you specified when you opened the file. You are not required to specify the VTD file type. If you included a directory specification for the file in the OPEN command, you must also include it in the CLOSE command. If you do not specify /PAGE, VTX assumes by default that the file to be closed is a page file.

If you are unsure of the file name to use, issue the SHOW FILE/ALL command beforehand to see which files are open.

Description

The CLOSE/PAGE command closes a VTX page file to the server. You do not need to include the /PAGE qualifier. VTX assumes you are closing a page file by default.

Example

The following example closes the page file MAIN for subscriber access.

```
SRV>  CLOSE MAIN
SRV>
```

EXIT

Lets you exit from server mode.

Format

EXIT

Description

The EXIT command lets you finish your work in server mode and returns you to control mode.

Example

The following example ends your work in server mode and returns you to control mode in the VTXCTL Utility.

```
SRV>  EXIT

CTL>
```

HELP

Lets you get help information for any server mode command.

Format

HELP *[topic]*

Parameter

topic
One of a number of topics for which help is available. If you specify a topic, you will get a help display related to that topic. If you do not specify a topic, you will get a list of topics for which help is available.

Description

The HELP command lets you get help information for server mode commands. The help available is similar to VMS help. You can ask for general help, or you can ask for help on specific topics and subtopics.

LOAD BASE

Loads the base page determination file, VTXBASE.TXT, and optionally specifies the number of times the VTX login page will display.

Format

LOAD BASE *[/MAXTRY=n]*

Qualifier

/MAXTRY=n
Specifies the number of times VTX will display the VTX login form for subscriber access. Valid entries are 0 to 5. The default value is 1.

If you specify a value of 0, VTX will not display a login form. For a subscriber to access VTX, the VTX account file (VTXACF.VTA) must have an account for that subscriber, or there must be a guest account.

If you specify a value from 1 to 5, VTX will display the login form up to the number of times specified or until the subscriber enters a valid account name and password. The login form displays only if there is no account in the VTX account file that allows the subscriber to access VTX.

If you specify a value other than the default value 1, you must enter the LOAD BASE/MAXTRY=n command each time you start the server.

Description

The LOAD BASE command loads the base page determination file, VTXBASE.TXT, which contains the information for determining the starting page for different VTX accounts.

Whenever you start the VTX server, the base page determination file is automatically loaded. The server then reads the file and stores the information in memory. The LOAD BASE command enables the server to reread the file without restarting the server for automatic loading.

Generally, you use the LOAD BASE command after you have made modifications to the base page determination file so you do not have to stop and restart the VTX server to load the file. Once the LOAD BASE command has been issued, subscribers will see any changes to the base page determination file that apply to their sessions.

The LOAD BASE command also lets you specify the number of times VTX will display the VTX login page to subscribers. If you want the VTX login page to display more than one time (the default), you must enter the LOAD BASE/MAXTRY=n command each time the server is started.

Examples

The following example reloads the base page determination file VTXBASE.TXT.

```
SRV>  LOAD BASE
SRV>
```

The following example reloads the base page determination file, VTXBASE.TXT, and specifies that the VTX login page will not be displayed for subscribers.

```
SRV>  LOAD BASE/MAXTRY=0
SRV>
```

OPEN/KEYWORD

Opens a VTX keyword file for subscriber access.

Format

OPEN/KEYWORD *[filename] [qualifier [...]]*

Parameter

filename
The name of the keyword file to be opened. You are not required to specify the VTK file type. If the file is not in your SYS$LOGIN directory, you must include a directory specification with the file name. The server looks for files in the SYS$LOGIN directory by default. If you do not specify a file name, the server tries to open VTXDATA.VTK as the default keyword file.

Qualifiers

/RANGE=(page-number, thru-page-number)
Specifies a page range. If you specify a range, the server searches only those keywords associated with that range. The number you use for the *page-number* must have a lower ASCII value than the *thru-page-number*, even though the *page-number* might be numerically higher than the *thru-page-number* value. For example, (1000,85) is valid; (85,1000) is not valid.

If you do not specify a page range, the server uses the range specified when the keyword file was created with the CREATE/KEYWORD command in the VTXUPD Utility.

/[REQUESTS[=n]
Specifies the number of simultaneous disk operations that can be done on this file. The default is 1. If your disk drive is not controlled by an intelligent controller, such as an HSC50, there is no advantage in allowing more than one simultaneous operation. Your system manager can tell you what kind of disk controller your system has.

/[NO]SHARE
Specifies whether or not the file is to be opened for shared access, which allows both the retrieval and update of the file's contents. With /NOSHARE, the default, subscribers can access the file's contents, but information providers cannot access the file's contents for update through the update server or Workbench server. If the update server or Workbench server already has the file open, you must use the /SHARE qualifier to open the file for the VTX server.

Description

The OPEN/KEYWORD command opens a VTX keyword file for subscriber access. The server searches open keyword files when a subscriber uses the FIND (keypad) function.

The VTX server searches a maximum of two keyword files when it receives a keyword request, even though multiple keyword files might be open and might have overlapping ranges. (Use the /RANGE qualifier to specify a page range.) Depending on how the keyword files were opened, the VTX server determines which files to search according to the following procedure:

1. The VTX server determines the page number the keyword request was issued from and uses that page number as the context for selecting the file to search. For example, if the subscriber issued the request while viewing page 100, the server determines the context of the keyword request to be 100.
2. The server searches the most recently opened keyword file whose page range includes the context value. For example, the server would first search FILEA.VTK of the following open keyword files because page number 100 falls within the range of 1–1*:
   - FILEC.VTK (Range 2–2*, opened fourth and most recently)
   - FILEA.VTK (Range 1–1*, opened third)
   - FILEB.VTK (Range 0–3*, opened second)
   - FILEG.VTK (Range 0–9*, opened first, the global file)
3. If the server finds a match in the selected keyword file, it ends the search and retrieves the corresponding page for the subscriber.

4. If the server does *not* find a match in the selected file, it searches the global keyword file (the keyword file with the range of 0–9*). The global keyword file is searched second, even if there are other keyword files open or if any of those files has a range that includes the context (FILEB in the example).

Examples

The following example opens the keyword file KEYMAIN.VTK for shared access.

```
SRV> OPEN/KEYWORD KEYMAIN.VTK /SHARE
SRV>
```

The following example requests the VTX server to open the keyword file KEYWORDS.VTK with a range from 0 to 6. If a subscriber is viewing a page between 0 and 6 and asks for a keyword search, VTX searches the KEYWORDS.VTK file.

```
SRV>  OPEN/KEYWORD/RANGE=(0,6) KEYWORDS.VTK
SRV>
```

OPEN/PAGE

Opens a VTX page file for subscriber access.

Format

OPEN/PAGE *[filename] [qualifier [...]]*

Parameter

filename
The name of the VTX page file to be opened. You are not required to specify the VTD file type. If the file is not in your SYS$LOGIN directory, you must include a directory specification with the file name. The server looks for files in the SYS$LOGIN directory by default.

If you do not specify /PAGE, VTX assumes by default that the file to be opened is a page file. If you do not specify a file name, the server tries to open VTXDATA.VTD as the default page file.

Qualifiers

/RANGE=(page-number, thru-page-number)
Specifies a page range for the file. *Page-number* indicates the first page in a range of pages. *Thru-page-number* indicates the last page in that range. The number you use for the *page-number* must have a lower ASCII value than the *thru-page-number*, even though the *page-number* might be numerically higher than the *thru-page-number* value. For example, (1000,85) is valid; (85,1000) is not valid.

If you specify a range, the server makes available only those pages that are within that range. For example, if you open a page file and specify that all pages from 0 to 2 be made available to subscribers, VTX makes available all pages beginning with 0 (including 099999999999) and 1 (including 199999999999), as well as 2 itself. If you specify 0,2*, you will get everything from 0 through 2, including 099999999999, 199999999999, and 299999999999; that is, all pages beginning with 0, 1, and 2.

If you do not specify a page range, the server uses the page range specified when the file was created with the CREATE/PAGE command in the VTXUPD Utility.

/[REQUESTS[=n]
Specifies the number of simultaneous disk operations that can be done on this file. The default is 1. If your disk drive is not controlled by an intelligent controller, such as an HSC50, there is no advantage in allowing more than one simultaneous operation. Your system manager can tell you what kind of disk controller your system has.

/[NO]SHARE
Specifies whether or not the file is to be opened for shared access, which allows both retrieval and update of the file's contents. With /NOSHARE, the default, subscribers can access the file's contents, but information providers cannot access the file's contents for update through the update server or Workbench server. If the update server or Workbench server already has the file open, you must use the /SHARE qualifier to open the file for the VTX server.

Description

The OPEN/PAGE command opens a VTX page file for subscriber access. You do not need to specify the /PAGE qualifier in the command. VTX assumes you are opening a page file by default.

You can have more than one page file open at a time. Use the /RANGE qualifier to specify a range of pages. When a VTX server receives a page request, it searches the most recently opened page file whose page range includes the page number requested. If the server does not find a match in the specified file, it does not search the other page files.

Examples

The following example opens the VTX page file MAIN.VTD for shared access.

```
SRV>  OPEN/PAGE MAIN.VTD /SHARE
SRV>
```

The following example opens pages within the range of 0 to 2* in the VTX page file MAIN.VTD for access by subscribers.

```
SRV>  OPEN/RANGE=(0,2*) MAIN
SRV>
```

REMOTE

Defines the name of a remote VTX server or application.

Format

REMOTE *remote-name [link-spec] [qualifier [...]]*

Parameters

remote-name
The name of the remote server or application. The *remote-name* is a string of one to eight characters and is the same name associated with one or more remote pages within the VTX infobase.

link-spec
A DECnet link specification through which the remote process can be started or accessed. A link specification consists of a node name, two colons, a double quotation mark, and a DECnet object number, followed by an equal sign and a double quotation mark, in that order; for example: LONDON::"43=".

The following DECnet link specifications are reserved for VTX:

"43="	VAX VTX server and concentrator
"56="	VAX VTX update server and Workbench server
"59="	VAX VTX/VALU VAS

For more information on DECnet object numbers, see Volume 5, Networking, in the *VMS System Management Subkit.*

You cannot use the /HERE qualifier when you include a link specification.

Qualifiers

/HERE
Assigns a remote name to the local (home) server. This name identifies the local server whenever it connects to another server (that is, to a server that is remote from the local one).

The remote name specified in the REMOTE/HERE command is the source server name. A base page determination file on a remote server uses this name to determine an entry point for subscribers accessing a remote infobase from this server. The remote server must have a remote connection to the source server and DECnet link.

You cannot include a link specification when you use the /HERE qualifier.

/[NO]TRUST

Specifies whether or not account validation information received over the link should be trusted. If you include the /TRUST qualifier, no explicit login validation is required for sessions established over this link. If you specify /NOTRUST, login validation is required. The default is /TRUST.

If you specify the /TRUST qualifier in conjunction with the /HERE qualifier, the local server will trust all incoming connections except those specified with the REMOTE command and the /NOTRUST qualifier.

If you specify the /NOTRUST qualifier in conjunction with the /HERE qualifier, the server will trust only those incoming connections it knows about from the REMOTE command and the /TRUST qualifier.

/FAILOVER = (server1,server2[,...])

Specifies failover remote servers, or applications, or both. Failover remote servers start functioning when the communication link to a primary remote server, or application, or both is unexpectedly broken.

The remote name of the failover remote servers is the same name as the primary remote server. The failover remote servers also have the same trust as the primary remote server.

During each VTX session, VTX starts at the primary remote server. If this connection is not possible or fails, VTX tries the failover remote servers until a connection is made or there are no more failover remote servers to try. VTX connects to failover remote servers in the reverse order of entry. For example, VTX first connects to server2, if one is listed, and then to server1.

If a subscriber is using VTX when the connection changes to a failover remote, VTX displays the original page that it displayed when it connected to the previous remote server or application.

Description

The REMOTE command defines the name of a remote VTX server or application. When a VTX infobase contains remote pages, you use the REMOTE command to define the path by which to access the remote infobase.

Each remote name specified for a remote page should have a corresponding DECnet link specification, unless you are specifying a remote name for the local (home) server. To specify a remote name for the local server, the REMOTE command should include the /HERE qualifier. The remote definition associates a DECnet object with the remote name. When a subscriber accesses a remote page, the server obtains the corresponding remote page and makes a DECnet connection to the VTX server or application that is specified by the DECnet object number.

If your VAX VTX service consists of remote servers or applications, you must enter definitions on each server or application for all other remote servers or applications in the service. You must also enter a REMOTE/HERE command on each server. This ensures that subscribers can reach all remote servers or applications and that subscribers receive a consistent response each time they access them.

For base page determination, where the target server wants to give access to a specific base page from a specific source server, the remote link specification must be bidirectional. That is, for specific base page determination, based on a source server, the following are required:

- There must be a remote specification on the source server pointing to the target server.
- There must be a remote specification on the target server pointing back to the source server.
- The source server must be identified in the base page determination file.

Examples

The following example specifies that SERVER_A will trust the remote names in all connect requests that it receives.

```
SRV>  REMOTE SERVER_A /HERE/TRUST
SRV>
```

The following example declares a remote server with the remote name BOSTON and the link specification ADMIN::"43=". The example explicitly specifies that any link to the remote server will require login validation.

```
SRV>  REMOTE BOSTON ADMIN::"43="/NOTRUST
SRV>
```

The following example first establishes SERVER_A as a trusting server. The example then declares (or makes known to SERVER_A) four remote servers, three of which are to be trusted. If SERVER_A receives connect requests from accounts on SERVER_D, the requests will not be trusted.

```
SRV>  REMOTE SERVER_A /HERE/TRUST
SRV>  REMOTE SERVER_B MFG::"43="/TRUST
SRV>  REMOTE SERVER_C CORP::"43="/TRUST
SRV>  REMOTE SERVER_D SALES::"148="/NOTRUST
SRV>  REMOTE SERVER_E MFG::"151="/TRUST
SRV>
```

The next example declares three failover remote servers for the primary remote name BOSTON. The three failover servers (ADMIN::"144=", ADMIN::"145=", and ADMIN::"146=") also have the remote name BOSTON and require login validation like the primary remote. If the connection to the primary remote is not possible or fails, VTX first tries to connect to ADMIN::"146=". If ADMIN::"146=" is also down, VTX tries to connect to ADMIN::"145=" and finally to ADMIN::"144=".

```
SRV>  REMOTE BOSTON ADMIN::"43="/NOTRUST -
_SRV> /FAILOVER=(ADMIN::"146=",ADMIN::"145=",ADMIN::"144=")
SRV>
```

SHOW COMMUNICATION

Displays status information about server communications.

Format

SHOW COMMUNICATION *[/OUTPUT=filename]*

Qualifier

/OUTPUT=filename
Specifies a VMS file where you want the requested information written. If you do not use the /OUTPUT qualifier, the information is displayed on your terminal screen.

Description

The SHOW COMMUNICATION command displays information about the DECnet communication links over which the server is communicating. The command produces a list of DECnet object numbers and indicates whether or not communication is established between an object number and the server. The object numbers can refer either to other servers or to other applications.

In addition, the SHOW COMMUNICATION command displays an inbound and outbound count for each DECnet link. The inbound count refers to VTX sessions that are coming into the VTX server. Such sessions originate with a VTX entity such as a TCP, application, or another server, and terminate with the current server. The outbound count refers to VTX sessions that are going away from the VTX server.

Example

The following example displays communication information about a VTX server process. The server is currently communicating with a remote process named VAS, which has a DECnet object number of 201. There is communication with one session over that link (outbound count of 1). The server is also involved in one local session (inbound count of 1).

```
SRV> SHOW COMMUNICATION

                  Server  is DECnet object number 145

  DECnet Specifier     State    Inbound Ct Outbound Ct Remote Name
-------------------- --------- ---------- ----------- -----------
0::"201="            Running            0           1 VAS
                     Running            1           0

2 communication links found
```

SHOW FILE

Displays information about files currently open to the server process.

Format

SHOW FILE *{/NAME=filename | /ALL} [/OUTPUT=filename]*

Qualifiers

/NAME=filename
Specifies the name of the file for which you want information displayed. The information includes the page number ranges for that file. If you omit the file type, such as VTD or VTK, and there is a page file and keyword file with the same file name, information on both files is displayed. When you specify a file name, you cannot use the /ALL qualifier.

/ALL
Displays information about all files in the infobase. When you use the /ALL qualifier, you cannot specify a file name.

/OUTPUT=filename
Specifies a VMS file where you want the requested information written. If you do not use the /OUTPUT qualifier, the information is displayed on your terminal screen.

Description

The SHOW FILE command displays information about files currently open to the server process. When you specify a file name, SHOW FILE displays the file name or names and page number ranges in the specified file that are currently open to the server. If you do not specify a file name, you must use the /ALL qualifier.

Example

The following example displays information about all VTX infobase files currently open to the server. Notice that each file is referred to as a *section* of the infobase. The *Req Ct* field indicates the number of times a page or keyword was requested from the infobase file.

```
SRV> SHOW FILE/ALL

Sec Type Status    Low Key    High Key  Req Ct         File Name
--- ---- ------ ---------- ------------ ------ ----------------------
  6 Page Share  18         18~~~~~~~~~~      0 [INFOBASE]PRODUCTS.VTD
  5 Page Share  14         14~~~~~~~~~~      0 [INFOBASE]INDUSNEWS.VTD
  4 Page Share  11         11~~~~~~~~~~      0 [INFOBASE]COMPNEWS.VTD
  3 Page Share  8          8~~~~~~~~~~~      0 [VALU]ELKPAGES.VTD
  2 Page Share  0          0~~~~~~~~~~~      0 [INFOBASE]MAIN.VTD
  1 Key  Share  0          9~~~~~~~~~~~      0 [INFOBASE]VTXKEY.VTK

6 open infobase sections

SRV>
```

SHOW REMOTE

Displays status information about remote processes that are currently defined for the server.

Format

SHOW REMOTE *{/NAME=remote-name | /ALL}*
[/OUTPUT=filename]

Qualifiers

/NAME=remote-name
Specifies the remote process for which you want information displayed. The remote name must match the name of the remote process and be one to eight characters in length. The name must also be assigned to any VTX remote pages that point to this remote name definition. If you specify a remote name, you cannot use the /ALL qualifier.

/ALL
Displays information about all remote processes that are currently defined for the server. When you use the /ALL qualifier, you cannot specify a remote name.

/OUTPUT=filename
Specifies a VMS file where you want the requested information written. If you do not use the /OUTPUT qualifier, the information is displayed on your terminal screen.

Description

The SHOW REMOTE command displays status information about remote processes that are currently defined for the server. If you do not specify a remote name, you must use the /ALL qualifier.

If you specify a particular remote name, SHOW REMOTE gives information only for that name. If you use the /ALL qualifier with SHOW REMOTE, VTX displays information about all remote names that are currently defined for the server.

Example

The following example displays information about all remote processes currently defined for a VTX server.

```
SRV>  SHOW REMOTE/ALL

Remote Name   Qualifiers   DECnet Specification
-----------  -------------  --------------------
VAS          /Trust         0::"201="
VASB         /Trust         0::"190="
VASA         /Trust         0::"180="

3 remote names defined

SRV>
```

SHOW SESSION

Displays status information about subscriber's VTX server sessions.

Format

SHOW SESSION *{/ID=(session-id[,...]) | /ALL} [qualifier [...]]*

Qualifiers

/ID=session-id
Displays information about one or more individual subscriber sessions. The *session-id* is a unique 20-character string that has the following format:

```
nnnnn-PPPPPPPP-00000
```

The first field (nnnnn) is the decimal representation of the DECnet node from which the session originated. (For information on how to convert this field to area/node format, see Volume 5, Networking, in the *VMS System Management Subkit*.)

The second field (PPPPPPPP) is the hexadecimal VMS process ID number.

The third field (00000) is a decimal offset that distinguishes sessions using different concentrator ports. Nonconcentrator sessions always have 00000 in the offset field.

You can omit leading zeros from each field when you specify a session identifier; for example, 4768-365-1. When you specify one or more session identifiers, you cannot use the /ALL qualifier. You can use the wildcard character (*) in place of a process ID or concentrator port offset.

/ALL
Displays information about all sessions. When you use the /ALL qualifier, you cannot specify a session identifier with the command.

/FULL
Displays complete information about sessions, including information on incoming and outgoing connections. If you do not include this qualifier, the SHOW SESSION command lists only summary data.

/OUTPUT=filename
Specifies a VMS file where you want the requested information written. If you do not use the /OUTPUT qualifier, the information is displayed on your terminal screen.

Description

The SHOW SESSION command displays status information about subscriber's VTX server sessions.

When issued with one or more session identifiers, this command displays information about the specified session or sessions. If you use the /ALL qualifier instead of specifying a session, the command displays information about all sessions currently connected to the server.

The display also lists the number of pages the subscriber has accessed from the infobase in this session. If the subscriber has done a keyword search and received a dynamic menu, the page count will also include the number of pages listed in the dynamic menu, even though the subscriber did not view each page.

Examples

The following example displays summary information about all VTX sessions currently attached to the server.

```
SRV>  SHOW SESSION/ALL

     Session ID          Session Started      Pages          Account Name
-------------------------------------------------------------------------
3171-0000274D-0    10-DEC-1989 08:42:35.06       1    %GUEST%
4253-1425785C-2    10-DEC-1989 08:44:22.19       3    BOSTON::MAELSTROM
2231-8735466B-9    10-DEC-1989 08:45:17.09       2    PARIS::QUIMBINGER
8965-4367529A-5    10-DEC-1989 08:47:12.30       3    LONDON::SHAKESPEARE

4 current sessions

SRV>
```

The following example displays complete information about one VTX session currently attached to the server.

```
SRV>  SHOW SESSION/ID=4253-1425785C-2/FULL

     Session ID           Session Started        Pages         Account Name
-------------------------------------------------------------------------------
4253-1425785C-2      10-DEC-1989 08:44:22.19         3   BOSTON::MAELSTROM
    Front end ........, type PAD   , state RUNNING
    Back  end REMOTE.., type SERVER, state RUNNING, DECnet 0::"174="

1 current session

SRV>
```

START COMMUNICATION

Establishes the server as a DECnet object, enabling two-way communication over the network.

Format

START COMMUNICATION *[/OBJECT=n]*

Qualifier

/OBJECT=n
Specifies a DECnet object number. You can enter any object number from 128 to 255. If you do not include the /OBJECT qualifier, the START COMMUNICATION command uses the default object number 43.

Description

The START COMMUNICATION command establishes the server as a DECnet object, enabling the server to accept connections from users through the terminal control program (TCP), concentrators, and other servers.

Example

The following example establishes the server as a DECnet object with the default DECnet object number 43.

```
SRV>  START COMMUNICATION
SRV>
```

START LOG

Initiates the logging of session logins and logouts.

Format

START LOG *[qualifier [...]]*

Qualifiers

/FILE=filename
Indicates the file where logging information is stored. The default log file is VTXSRV_name.VTL, where *name* is the name given to the VTX server when it was started.

/PAGE
Causes the server to log page accesses. You must include either the /ALL or /FLAG qualifier with the /PAGE qualifier.

/ALL
Causes the server to log all page accesses. To specify the /ALL qualifier, you must also specify the /PAGE qualifier. You cannot use the /ALL qualifier with the /FLAG qualifier.

/FLAG
Causes the server to log accesses to only those pages that are flagged for logging. Using the /FLAG qualifier requires that you also specify the /PAGE qualifier. You cannot use the /FLAG qualifier with the /ALL qualifier.

/FLUSH=n
Modifies how often the server log file is to be written (flushed) to disk. The value given to the /FLUSH qualifier indicates the number of records that are to be written to the log file before a flush can occur. By default, the server log file is flushed to disk each time 10 records are written to the log file. For optimal integrity of the server log file, you should specify a value of 1 for the /FLUSH qualifier so that every logged record is immediately written to disk. To avoid having your server log file flushed, you should specify an arbitrarily large value for the /FLUSH qualifier.

/SUPERSEDE

Causes the server to create a new version of the server log file. If you do not use the /SUPERSEDE qualifier, the server appends log records to the most recent version of the log file, if one exists. If the log file does not already exist, the server creates and logs records to the server log file whose name you specify or to the default log file if you do not specify a name.

Description

The START LOG command initiates the logging of various server activities in its log file. If server logging has already been started and you issue a second START LOG command that includes the /PAGE qualifier with either the /FLAG qualifier or the /ALL qualifier, the server logs accesses to pages as specified (flagged or all).

Appendix C contains a description of the server log record format.

Example

In the following example, the server opens the default log file and starts logging accesses to flagged pages. It then changes to logging accesses to all pages and writing server log records immediately to disk (/FLUSH=1). The last two commands stop server logging.

```
SRV> START LOG
SRV> START LOG/PAGE/FLAG
SRV> START LOG/PAGE/ALL/FLUSH=1
SRV> STOP LOG/PAGE
SRV> STOP LOG
SRV>
```

STOP COMMUNICATION

Stops future server communication links.

Format

STOP COMMUNICATION

Description

The STOP COMMUNICATION command restricts any future communication links to the server from being initiated, but leaves all current links active. The command also removes the server's DECnet object number from the list of active object numbers. To resume communication with the server process, use the START COMMUNICATION command.

Example

The following example stops all future links from being initiated until server communication is restarted. The server's DECnet object number is deleted from the list of active object numbers.

```
SRV> STOP COMMUNICATION
SRV>
```

STOP LOG

Stops server logging.

Format

STOP LOG *[/PAGE]*

Qualifier

/PAGE
Specifies that only page logging is to be stopped.

Description

The STOP LOG command stops server logging. Without the /PAGE qualifier, this command stops all logging and closes the log file.

Example

The following example stops all logging for the server and closes the log file.

```
SRV>  STOP LOG
SRV>
```

STOP SESSION

Stops active server sessions.

Format

STOP SESSION *{/ID=(session-id[,...]) | /ALL}*

Qualifiers

/ID=session-id
Specifies one or more individual subscriber sessions. The *session-id* is a unique 20-character string that has the following format:

```
nnnnn-PPPPPPPP-00000
```

The first field (nnnnn) is the decimal representation of the DECnet node from which the session originated. (For information on how to convert this field to area/node format, see Volume 5, Networking, in the *VMS System Management Subkit*.)

The second field (PPPPPPPP) is the hexadecimal VMS process ID number.

The third field (00000) is a decimal offset that distinguishes sessions using different concentrator ports. Routed and nonconcentrator sessions always have 00000 in the offset field.

You can omit leading zeros from each field when specifying a session identifier; for example, 4768-364-1. You can use VMS wildcard characters to specify session identifiers. When you specify one or more session identifiers, you cannot use the /ALL qualifier.

/ALL
Stops all sessions. When you use the /ALL qualifier, you cannot specify a session identifier.

Description

The STOP SESSION command stops active server sessions. When you specify one or more session identifiers, the STOP SESSION command stops those sessions. To find specific session numbers, use the SHOW SESSION/ALL command.

Example

The following example stops all sessions currently associated with a VTX server.

```
SRV> STOP SESSION/ALL
SRV>
```

2.8 Concentrator Mode

From control mode, there are two ways to access concentrator mode:

- If you do not have a concentrator running under your group UIC, issue the START CONCENTRATOR command.
- If you have a concentrator running under your group UIC, issue the CONNECT CONCENTRATOR command.

You use concentrator mode commands at the CON> prompt to start and stop concentrators and to assign and deassign ports. Table 2–4 summarizes the concentrator mode commands.

In some VTX configurations, there will be only a concentrator on an individual VMS system. That concentrator will be linked to a server on another node. Other configurations can involve several concentrators on the same VMS system. You can manage all types of concentrator control from concentrator mode.

A concentrator can operate in one of the following modes:

- Local mode

  In local mode, the terminals are dedicated to VTX, and the concentrator has direct control over the terminals connected to it.
- Routed mode

  In routed mode, the terminals are not dedicated to VTX, and the concentrator simply serves as a router for data that is passing between terminals and servers.

Table 2–4: VTXCTL Utility—Concentrator Mode Commands

Command	Description
ASSIGN	Assigns a terminal port to a concentrator.
DEASSIGN	Deassigns a terminal port from a concentrator.
EXIT	Exits from concentrator mode.
HELP	Accesses online help information about concentrator mode commands.

(continued on next page)

Table 2–4 (Cont.): VTXCTL Utility—Concentrator Mode Commands

Command	Description
SHOW COMMUNICATION	Displays information about communication links that are associated with the concentrator.
SHOW SESSION	Displays information about sessions that are associated with the concentrator.
START COMMUNICATION	Enables communication with or through a concentrator process.
STOP COMMUNICATION	Stops incoming communication request.
STOP SESSION	Stops incoming sessions.

ASSIGN

Assigns a terminal port to the concentrator. (See the next two commands for information about assigning an X.29 or an SNA LU type 2.0 session.)

Format

ASSIGN *port-name [destination-page] [qualifier [...]]*

Parameters

port-name
The name of the terminal or LAT port. For example, TTA0: and LTA3: are port names.

destination-page
The destination page that will be accessed as soon as the session on the specified terminal begins. The *destination-page* parameter can be either a page number or a keyword. (Note that when you use this parameter, you are overriding the base page determination file.)

Qualifiers

/DEVICE_TYPE=type
Specifies the device type of the terminal being connected to the concentrator. Valid device types include the following:

- A1 (ALL-IN-1 GOLD key mappings)
- VT100
- VT125
- VT220
- VT240
- VT241
- VTX20
- DECTALK

- IBMPC
- NORPAK
- PRO_SERIES
- MINITEL
- SONY

VTX also supports IBM 3270 data stream terminals (through the concentrator only). See the ASSIGN/SNA3270DS command.

/protocol-qualifier
Specifies the protocol for the session. The default protocol qualifier is /ASCII. Valid protocol qualifiers include the following:

- /ANTIOPE
- /ASCII
- /REGIS
- /NAPLPS
- /PRESTEL
- /CEPT

There are restrictions on which protocols are valid with the device type specified. Table 2–5 lists the protocols that are valid for each device type.

/INQUIRE
Indicates that the VMS operating system will check for a device type at the start of each session that originates from the specified terminal port. If you use the /INQUIRE qualifier, you cannot use /DEVICE_TYPE or /protocol-qualifier.

/LAT
Assigns a LAT port through the concentrator. LAT ports are restricted to DIGITAL terminals and the ALL-IN-1 device type.

/LANGUAGE=type
Specifies the default language for sessions initiated from the specified terminal port. Valid language types include English, French, German, Italian, Spanish, and Swedish. You must specify this qualifier if a login form is to be used. If you do not, then the login forms for both the English and unknown language must be present in the infobase.

Description

The ASSIGN command assigns a terminal or LAT port to the concentrator. The ASSIGN command causes the concentrator to assume control of the port specified for VTX operations. You can specify only one port with each ASSIGN command. The ASSIGN command can include default device type, protocol, and language qualifiers. Table 2–5 lists the device types that are supported and the protocols that are valid for each device type.

At the same time that you assign the terminal port, you can specify a destination page for the subscriber to access as soon as the session starts.

You must set world read access on any terminal port that you plan to assign to a VTX concentrator. For any LAT port that you plan to assign, you must set the appropriate characteristics and create the port in the LATCP utility. See Section 2.2.2 for information about protection for terminal ports and about LAT support.

Table 2–5: Supported Device Types and Protocols

Device	Device Type Specification	Valid Protocol
DIGITAL VT100	VT100	/ASCII
DIGITAL VT125	VT125	/ASCII, /REGIS[1]
DIGITAL VT220	VT220	/ASCII
DIGITAL VT240	VT240	/ASCII, /REGIS
DIGITAL VT241	VT241	/ASCII, /REGIS
DIGITAL VAXstation	VWS	/UIS
DIGITAL Professional, DECmate, and Rainbow personal computers with either PRO NAPLPS[2]or VT100 class terminal emulation	PRO_SERIES	/ASCII, /REGIS, /NAPLPS
DIGITAL VT100 and VT200 series terminals with ALL-IN-1 key mappings	A1	/ASCII, /REGIS

[1]Remote Graphics Instruction Set
[2]North American Presentation Level Protocol Syntax

(continued on next page)

Table 2–5 (Cont.): Supported Device Types and Protocols

Device	Device Type Specification	Valid Protocol
DIGITAL VTX20	VTX20	/ANTIOPE, /ASCII, /CEPT, /PRESTEL
DECtalk unit (through concentrator only)	DECTALK	/ASCII, /ANTIOPE
IBM PC, running CROSSTALK	IBMPC	/ASCII
Minitel terminal, French version only	Minitel	/ANTIOPE
Norpak Mark IV	Norpak	/NAPLPS
SONY VDX-1000 NAPLPS	SONY	/NAPLPS
Generic CEPT terminals	—	/CEPT
Generic Prestel terminals	—	/PRESTEL

Examples

The following example assigns the terminal port TTA4: to a concentrator and requests the VMS operating system to check for a device type at the start of each session that originates from this port.

```
CON> ASSIGN/INQUIRE TTA4:
CON>
```

The following example assigns the LAT port LTA2: to a concentrator and specifies the ALL-IN-1 TSM.

```
CON> ASSIGN/LAT/DEVICE_TYPE=A1 LTA2:
CON>
```

ASSIGN/X29

Allocates a block of X.29 sessions.

Format

ASSIGN/X29 *[destination-page] [qualifier [...]]*

Parameter

destination-page
The destination page that will be accessed as soon as any of the allocated sessions begins. The *destination-page* parameter can be either a page number or a keyword. (Note that when you use this parameter, you are overriding the base page determination file.)

Qualifiers

/SESSIONS = n
Specifies the number of X.29 sessions to preallocate. The default number of sessions is 1.

/DEVICE_TYPE = type
Specifies the default device type for the sessions being connected to the concentrator. Valid device types include the following:

- A1 (ALL-IN-1 GOLD key mappings)
- VT100
- VT125
- VT220
- VT240
- VT241
- VTX20
- DECTALK
- IBMPC

- NORPAK
- PRO_SERIES
- MINITEL
- SONY

/protocol-qualifier
Specifies the protocol for the sessions. Valid protocol qualifiers include the following:

- /ANTIOPE
- /ASCII
- /REGIS
- /NAPLPS
- /PRESTEL
- /CEPT

There are restrictions on which protocols are valid with the device type specified. Table 2–5 in this chapter lists the protocols that are valid for each device type.

/INQUIRE
Indicates that the VMS operating sytem will check for a device type at the start of each session. If you use the /INQUIRE qualifier, you cannot use /DEVICE_TYPE or /protocol-qualifier.

/LANGUAGE=type
Specifies the default language for the sessions being connected to the concentrator. The valid language types are English, French, German, Italian, Spanish, and Swedish.

Description

The ASSIGN/X29 command allocates a block of X.29 sessions. The ASSIGN/X29 command can include default device type, protocol, and language qualifiers. Table 2–5 lists the device types that VTX supports and the protocols that are valid for each device type.

The concentrator cannot start any of these X.29 sessions until it receives an incoming X.29 call. The concentrator will accept incoming X.29 calls until it uses all of the preallocated X.29 sessions. This command will return an informational message with the port name for the preallocated session that can be used to deassign a particular session. The ASSIGN/X29 command can be issued repeatedly to increase the number of preallocated X.29 sessions.

The procedures and prerequisites for supporting X.29 sessions through a VTX concentrator are described in the *VAX VTX Guide to Modifying the Terminal Control Program (TCP).*

Example

The following example allocates two X.29 sessions and specifies French as the default language type for the sessions.

```
CON> ASSIGN/X29/SESSIONS=2/LANGUAGE=French
%VTX-I-PORTASSIGN, port X29-0002 assigned, session ID is 3171-20201EC1-2
%VTX-I-PORTASSIGN, port X29-0003 assigned, session ID is 3171-20201EC1-3
CON>
```

ASSIGN/SNA3270DS

Tells the concentrator to initiate one or more SNA LU type 2.0 sessions with one or more instances of an IBM host application so that one or more IBM 3270 data stream terminals can access VTX.

Format

ASSIGN/SNA3270DS *[destination-page] /GWYNODE=node-spec {/ACCESS_NAME=access-name | qualifier} [qualifier [...]]*

Parameter

destination-page
The destination page that will be accessed as soon as any of the initiated sessions begins. A *destination-page* parameter can be either a page number or a keyword. (Note that when you use this parameter, you are overriding the base page determination file.)

Qualifiers

/LANGUAGE=type
Specifies the language for the sessions. Valid language types are English, French, German, Italian, Spanish, and Swedish.

/SESSIONS=n
Specifies the number of VTX sessions to preallocate for concurrent access by IBM 3270 data stream terminals. The default number of sessions is 1.

/GWYNODE=node-spec
Specifies the DECnet/SNA gateway node to use for communication with the IBM host. The *node-spec* must be the name of the gateway node. The *node-spec* is an alphanumeric string of one to six characters.

/ACCESS_NAME=access-name
Specifies the name of the gateway access name table to use. The *access-name* is an alphanumeric string of one to eight characters, chosen from the set of A–Z, 0–9, the period (.), the dollar sign ($), the at sign (@), and the pound sign (#). If you use other qualifiers along with the /ACCESS_NAME qualifier, the values for the qualifiers override any existing values found in the access name table you specified. If the /ACCESS_NAME is not specified, then some or all of the remaining qualifiers must be specified.

/APPLICATION_NAME=appl-name
Specifies the PLU application (for example, CICS) for the SNA LU type 2.0 session. The *appl-name* is an alphanumeric string of one to eight characters. This qualifier does not need to be specified if the /ACCESS_NAME qualifier is specified.

/CIRCUIT=circuit-name
Identifies the DECnet name of a particular physical link from the gateway to the IBM host to be used to establish the SNA LU type 2.0 session (for example LC-0). This qualifier does not need to be specified if the /ACCESS_NAME qualifier is specified.

/LOGON_MODE=mode-name
Specifies the name of an entry in the host Logon Mode Table (LMT) defined by the host IBM system. This entry specifies a selected set of SNA protocol options. The *mode-name* is an alphanumeric string of one to eight characters, chosen from the set of A–Z, 0–9, the period (.), the dollar sign ($), the at sign (@), and the pound sign (#). This qualifier does not need to be specified if the /ACCESS_NAME qualifier is specified.

/ADDRESS=session-address
Specifies the local session address to use in communication with the IBM host. The *session-address* is an integer in the range of 1 to 255. This qualifier does not need be to specified if the /ACCESS_NAME qualifier is specified.

/USER_ID=user-id
Specifies the user of the SNA session to the IBM host. The *user-id* is an alphanumeric string of one to eight characters. This qualifier does not need to be specified if the /ACCESS_NAME qualifier is specified.

/PASSWORD=password
Specifies a password to be used in conjunction with the /USER_ID qualifier. This qualifier does not need to be specified if the /ACCESS_NAME qualifier is specified.

/DATA=user-data
Specifies optional data to be sent to the IBM host when the SNA session is established. The *user-data* is an alphanumeric string of 1 to 128 characters.

/TPN=transaction-name
Specifies the name of the custom-written, pass-through application. The *transaction-name* can be a name of up to eight ASCII characters.

Description

The ASSIGN/SNA3270DS command tells the concentrator to initiate one or more SNA LU type 2.0 sessions with one or more instances of an IBM host application so that one or more IBM 3270 data stream terminals can access VTX. The procedures and prerequisites for supporting SNA LU type 2.0 sessions through a VTX concentrator are described in the *VAX VTX Guide to Modifying the Terminal Control Program (TCP).*

The ASSIGN/SNA3270DS command must include the /GWYNODE qualifier listing the name of the gateway node. Depending on how the gateway is configured, one or more of the other qualifiers will probably be needed.

The ASSIGN/SNA3270DS command returns an informational message with the port name for the preallocated session that can be used to deassign a particular session.

Example

The following example starts one port on the concentrator for use by 3270 class terminals. The DECnet/SNA gateway node used is GWYSNA; the access name entry on GWYSNA is CICS; and the transaction to access on the IBM host is VTX1.

```
CON>  ASSIGN/SNA3270DS/GWYNODE=GWYSNA/ACCESS_NAME=CICS/TPN=VTX1
CON>
```

DEASSIGN

Deassigns a terminal port from the concentrator.

Format

DEASSIGN *{port-name | /ALL | /X29 | /SNA3270DS}*

Parameter

port-name
The VMS name of the terminal port. For example, TTA0: and TTH3: are port names. If you specify a port name, you cannot use the /ALL, /X29, or /SNA3270DS qualifiers.

Qualifiers

/ALL
Specifies that all ports currently assigned to the concentrator are to be deassigned. If you use this qualifier, you cannot use the /ALL or /SNA3270DS qualifiers, and you cannot specify a port name.

/X29
Specifies that all allocated X.29 sessions are to be deleted. If you use this qualifier, you cannot use the /ALL or /SNA3270DS qualifiers, and you cannot specify a port name.

/SNA3270DS
Specifies that all 3270 data stream terminal sessions currently assigned to the concentrator are to be deassigned. If you use this qualifier, you cannot use the /ALL or /X29 qualifiers, and you cannot specify a port name.

Description

The DEASSIGN command deassigns a terminal port from the concentrator. If there is an active session currently associated with a port, the DEASSIGN command ends the session. You must include either a port name, the /ALL qualifier, the /X29 qualifier, or the /SNA3270DS qualifier with the DEASSIGN command.

Example

The following example deassigns all terminal ports currently assigned to the concentrator.

```
CON> DEASSIGN/ALL
CON>
```

EXIT

Lets you exit from concentrator mode.

Format

EXIT

Description

The EXIT command lets you finish your work in concentrator mode and returns you to control mode.

Example

The following example ends your work in concentrator mode and returns you to control mode in the VTXCTL Utility.

```
SRV>  EXIT

CTL>
```

HELP

Lets you get help information for any concentrator mode command.

Format

HELP *[topic]*

Parameter

topic
One of a number of topics for which help is available. If you specify a topic, you will get a help display related to that topic. If you do not specify a topic, you will get a list of topics for which help is available.

Description

The HELP command lets you get help information for concentrator mode commands. The help available is similar to VMS help. You can ask for general help, or you can ask for help on specific topics and subtopics.

SHOW COMMUNICATION

Displays information about concentrator communications.

Format

SHOW COMMUNICATION *[/X29] [qualifier [...]]*

Qualifiers

/X29
Displays the values of all qualifiers previously assigned by the most recent START COMMUNICATION/X29 command.

/OUTPUT=filename
Specifies the VMS file where you want the requested information written. If you do not use the /OUTPUT qualifier, the information is displayed on your terminal screen.

Description

The SHOW COMMUNICATION command displays information about concentrator communications. The information displayed includes the concentrator's DECnet object number and a list of the active DECnet links from the concentrator to the server or from the concentrator to the terminal control program (TCP).

In addition, this command displays an inbound and outbound count for each DECnet link. The inbound count refers to VTX sessions coming into the concentrator. Such sessions are DECnet sessions that originate with a VTX entity such as a TCP. The display does not show dedicated terminal connections to the concentrator in the inbound count because they are not DECnet connections. The outbound count refers to VTX sessions that are going away from the concentrator to a server.

The display also lists any defined failover local servers for the concentrator. Failover local servers are described in Section 2.2.1.

Examples

The following example displays communication information about a concentrator process.

```
CON> SHOW COMMUNICATION

Concentrator is not declared as a DECnet object

  DECnet Specifier    State   Inbound Ct Outbound Ct
-------------------- -------- ---------- -----------
TOMARA::"145="       Running      0           1

1 communication link found

Primary server for new session connects is TOMARA::"145="
Failover server VTX$SERVER_02 is defined as KIWI::"143="
                VTX$SERVER_03 is defined as PLUM::"143="

CON>
```

The following example displays the values of all qualifiers used in the last START COMMUNICATION/X29 command.

```
CON> SHOW COMMUNICATION/X29

LOW subaddress: 94
HIGH subaddress: 94
No PRIORITY specified
No REMOTE DTE specified
No USER GROUP specified
No USER DATA specified
No DATA MASK specified

CON>
```

SHOW SESSION

Displays information about concentrator sessions.

Format

SHOW SESSION *{/ID=(session-id[,...]) | qualifier} [/OUTPUT]*

Qualifiers

/ID=session-id
Specifies one or more individual concentrator sessions. The *session-id* is a unique 20-character string with the following format:

```
nnnnn-PPPPPPPP-00000
```

The first field (nnnnn) is the decimal representation of the DECnet node from which the session originated. (For information on how to convert this field to area/node format, see Volume 5, Networking, in the *VMS System Management Subkit*.)

The second field (PPPPPPPP) is the hexadecimal VMS process ID number.

The third field (00000) is a decimal offset that distinguishes sessions using different concentrator ports. Routed sessions always have 00000 in the offset field.

You can omit leading zeros from each field when specifying a session identifier; for example, 4768-364-1. You can use VMS wildcard characters in the process ID and offset value fields.

When you specify one or more session identifiers, you cannot use the /ALL, /LOCAL, /ROUTED, /X29, or /SNA3270DS qualifiers.

/ALL
Indicates that you want to display a list of all active sessions currently associated with the concentrator; that is, both local and routed sessions. This qualifier can be used with the /OUTPUT qualifier, but not with any others.

/LOCAL
Limits the display to information about sessions that are assigned to a concentrator operating in local mode, rather than routed mode. This qualifier can be used with the /OUTPUT qualifier, but not with any others.

/ROUTED
Limits the display to information about sessions that are assigned to a concentrator operating in routed mode, rather than local mode. This qualifier can be used with the /OUTPUT qualifier, but not with any others.

/X29
Specifies that the display be confined to information about all X.29 sessions. This qualifier can be used with the /OUTPUT qualifier, but not with any others.

/SNA3270DS
Specifies that the display be confined to information about all SNA 3270 data stream terminal sessions. You can use this qualifier to determine the state of your SNA sessions in reference to the VTAPDS protocol. For example, when this qualifier is used, VTX displays information about the last protocol message type sent or received, as well as special SNA information that was entered with the ASSIGN command. You can use this qualifier with the /OUTPUT qualifier, but not with any others.

/OUTPUT=filename
Specifies the VMS file where you want the requested information written. If you do not use the /OUTPUT qualifier, the information is displayed on your terminal screen.

Description

The SHOW SESSION command displays information about concentrator sessions. The display includes information about sessions currently in progress with the concentrator. You must either specify a session identifier or use the /ALL, /LOCAL, /ROUTED, /X29, or /SNA3270DS qualifier.

Examples

The following example displays information about all sessions currently running through the concentrator.

```
CON> SHOW SESSION/ALL

     Session ID         State      Port   Type  Device Protocol
-------------------- ------------ ------ ------ ------ --------
3171-00000330-3      Idle         TTD4:  Local  DECCRT REGIS
3171-00000115-0      Running             Routed
3171-00000330-1      Running      TXA5:  Local  DECCRT ASCII

3 current sessions

CON>
```

The following example displays information about all SNA 3270 data stream terminal sessions running through the concentrator.

```
CON>  SHOW SESSION/SNA3270DS

                          GWY  Access Applic      Sess  Last Message
  Sessions ID      Port    Node  Name   Name  Circ Addr Sent/Received
---------------  -------- -----  ----- ------ ---- ---- -------------
3171-20600BD0-5  SNA-0005 OISGWY CICS  CICS17      0    Ready_ack
3171-20600BD0-4  SNA-0004 OISGWY CICS  CICS17      0    Ready_ack
3171-20600BD0-2  SNA-0002 PINCH  CICS  CICS17      0    Ready_ack
3171-20600BD0-1  SNA-0001 PINCH  CICS  CICS        0    Page_ack

4 current sessions

CON>
```

START COMMUNICATION

Establishes communication with or through a concentrator process. (The START COMMUNICATION/X29 command is discussed separately in the next section.)

Format

START COMMUNICATION *[qualifier [...]]*

Qualifiers

/OBJECT[=[n]]
Specifies that the concentrator is to declare itself a DECnet object, capable of accepting links from terminal control programs (TCPs). You can enter any object number from 128 to 255. If you do not specify an object number, the default object number 43 will be used. This qualifier is required if you plan to use the concentrator to route sessions through to remote VTX servers.

/SERVER[=(link-spec[,...])]
Specifies the DECnet link specification, or specifications, for the server, or servers, to which the concentrator will be linked. The link specification is an alphanumeric string that, when expanded, specifies a DECnet node name and a DECnet object number for the server. If you do not specify a link specification, the concentrator will establish a connection to the DECnet object that is defined with the logical name VTX$SERVER.

A link specification consists of a node name, two colons, double quotation marks, and a DECnet object number, followed by an equal sign and a double quotation mark, in that order; for example, LONDON::"43=".

You can include up to nine link specifications with the /SERVER qualifier. The first one is the primary link, the second one is the secondary link, and so on. If the primary link fails, VTX tries to access the secondary link. If access to the secondary link is successful, the concentrator is linked to that server. When the primary link is restored, the concentrator will remain with the current sessions on the secondary link, but all new connections will try to access the primary link.

Description

The START COMMUNICATION command establishes communication with or through a concentrator process.

Example

The following example enables communication with a concentrator and declares the concentrator to be a DECnet object with the DECnet object number 130. The primary server is DECnet object 43 on node BOSTON, and the secondary server is DECnet object 43 on node NYC.

```
CON> START COMMUNICATION/OBJECT=130/SERVER=(BOSTON::"43=",NYC::"43=")
CON>
```

START COMMUNICATION/X29

Declares the concentrator as a P.S.I. network process that receives incoming X.29 calls.

Format

START COMMUNICATION/X29 *[qualifier [...]]*

Qualifiers

/LO_SUBADDRESS = n
Specifies the lowest value of the range of subaddresses to be received by this concentrator. If you omit this qualifier, the concentrator can receive the entire range.

/HI_SUBADDRESS = n
Specifies the highest value of the range of subaddresses to be received by this concentrator. If you omit this qualifier, the concentrator can receive the entire range.

/PRIORITY = n
Specifies a P.S.I. destination priority value in the range 0 (low) to 255 (high). The P.S.I. default is 127.

/REMOTE_DTE = string
Specifies the remote DTE (Data Terminal Equipment) address from which this concentrator will accept calls. If this qualifier is not specified, the concentrator will accept calls from all remote DTE addresses.

/USER_GROUP = string
Specifies the user group from which this concentrator will accept calls. If this qualifier is not specified, the concentrator will accept calls from all user groups.

/USER_DATA = string
Specifies up to 16 bytes of data to be compared with the incoming data masked by the /DATA_MASK qualifier. If this qualifier is not specified, no comparison with the user data is made.

/DATA_MASK = string
Specifies up to 16 bytes to mask the user data of the incoming call for comparison with the data specified by the /USER_DATA qualifier. If this qualifier is not specified, no comparison with the user data is made.

Description

The START COMMUNICATION/X29 command declares the concentrator as a P.S.I. network process that receives incoming X.29 calls.

The qualifiers specify which incoming X.29 calls the concentrator will accept. For more information about the START COMMUNICATION/X29 command qualifiers, refer to the discussion of the IO$_ACPCONTROL QIO function in the *VAX P.S.I. X29 Programmer's Guide*.

Example

The following example declares a concentrator as a P.S.I. X.29 destination to receive incoming X.29 calls. The example assumes a DTE destination address of 311060312345. When the command shown in the example is executed, the DTE subaddresses will be from 10 to 20.

```
CON> START COMMUNICATION/X29/LO=10/HI=20/REMOTE_DTE=311060312345
CON>
```

STOP COMMUNICATION

Stops concentrator communication links.

Format

STOP COMMUNICATION *[/X29]*

Qualifier

/X29
Specifies that the concentrator will no longer receive X.29 calls and prevents new X.29 sessions from starting. Active X.29 calls are unaffected by this qualifier.

Description

The STOP COMMUNICATION command stops concentrator communication links and prevents new sessions from being initiated.

Example

The following example prevents new communication links from being established, thus preventing incoming routed sessions from being established.

```
CON> STOP COMMUNICATION
CON>
```

STOP SESSION

Stops active concentrator sessions (those in the running state, not idle state).

Format

STOP SESSION *{/ID=(session-id[,...]) | qualifier}*

Qualifiers

/ID=session-id
Specifies one or more individual concentrator sessions. The *session-id* is a unique 20-character string with the following format:

```
nnnnn-PPPPPPPP-00000
```

The first field (nnnnn) is the decimal representation of the DECnet node from which the session originated. (For information on how to convert this field to area/node format, see Volume 5, Networking, in the *VMS System Management Subkit*.)

The second field (PPPPPPPP) is the hexadecimal VMS process ID number.

The third field (00000) is a decimal offset that distinguishes sessions using different concentrator ports. Routed sessions always have 00000 in the offset field.

You can omit leading zeros from each field when specifying a session identifier; for example, 4768-364-1. You can use VMS wildcard characters in the process ID and offset fields of session identifiers. When you specify one or more session identifiers, you cannot use any other qualifiers.

/ALL
Stops all active sessions (running state) currently associated with the concentrator, both local and routed. When you use the /ALL qualifier, you cannot use any other qualifiers, and you cannot specify a session identifier.

/LOCAL
Stops only local, rather than routed, active sessions. When you use the /LOCAL qualifier, you cannot use any other qualifiers or specify a session identifier.

/ROUTED
Stops only routed, rather than local, active sessions. A routed session refers to a session that passes through a concentrator to a server on another node. When you use the /ROUTED qualifier, you cannot use any other qualifiers or specify a session identifier.

/X29
Specifies that all X.29 active sessions (running state) are to be stopped, but not deassigned. When they are stopped, the sessions become available to receive incoming X.29 calls. If you use the /X29 qualifier, you cannot use any other qualifiers or specify a session identifier.

/SNA3270DS
Specifies that all SNA 3270 data stream sessions currently active are to be stopped, but not deassigned. When they are stopped, the sessions become available to receive session startup messages from the IBM system. If you use the /SNA3270DS qualifier, you cannot use any other qualifiers or specify a session identifier.

Description

The STOP SESSION command stops active concentrator sessions (those in the running state, not idle state). This command stops the specified session or sessions, or, if you use the /ALL qualifier, all sessions. You must either specify a session identifier or use a qualifier.

Example

The following example stops session 3171-000003F3-0.

```
CON>  STOP SESSION/ID=3171-000003F3-0
CON>
```

2.9 Update Server Mode

From control mode, there are two ways to access update server mode:

- If you do not have an update server running under your group UIC, issue the START UPDATE_SERVER command.
- If you have an update server running under your group UIC, issue the CONNECT UPDATE_SERVER command.

You use update server mode commands at the UPDSRV> prompt to manage communications with the update server. Table 2–6 summarizes the update server mode commands.

The update server, which is optional in a VTX configuration, links the infobase with the VTX Update (VTXUPD) Utility. The update server enables IPs on either local or remote nodes to access and update files in the infobase that is on the same node as the update server. IPs use the VTXUPD Utility to access the update server and the infobase files. All communications between the VTXUPD Utility and the infobase pass through the update server.

One of the advantages of updating the infobase through the update server is that you can perform updates without having to shut down the VTX system. Thus, subscribers can be using VTX at the same time that the update server is passing updates from the VTXUPD Utility to the infobase.

The update server also performs a security function for the infobase files that are located at its node. IPs on remote nodes must have authorization to access the infobase on the update server's node. To access the infobase through the update server, IPs must have an IP account in the VTX account file (VTXACF.VTA) for the update server's node. The IP account contains information about what infobase pages the IP is allowed to read and write. Local infobase managers can also use the update server security check to limit access by their own IPs. For information about establishing IP accounts, see the description of the Account Control Utility (VTXACU) in Chapter 3 of this manual.

Table 2–6: VTXCTL Utility—Update Server Mode Commands

Command	Description
CLOSE/ALL	Closes all page and keyword files that are open to the update server.
CLOSE/KEYWORD	Closes a keyword file that is open to the update server.
CLOSE/PAGE	Closes a page file that is open to the update server.
EXIT	Exits from update server mode.
HELP	Accesses online help information about update server mode commands.
OPEN/KEYWORD	Opens a VTX keyword file for access by the update server.
OPEN/PAGE	Opens a VTX page file for access by the update server.
SHOW COMMUNICATION	Displays information about communication links.
SHOW FILE	Displays information about infobase files.
SHOW SESSION	Displays information about update server sessions.
START COMMUNICATION	Establishes the update server as a DECnet object.
STOP COMMUNICATION	Stops the update server from accepting incoming communication requests.
STOP SESSION	Stops active update server sessions.

CLOSE/ALL

Closes all VTX page and keyword files currently open to the update server.

Format

CLOSE/ALL

Description

The CLOSE/ALL command closes all VTX page and keyword files currently open to the update server.

Example

The following example closes all infobase files (keyword and page files) currently open to the update server.

```
UPDSRV>  CLOSE/ALL
%VTX-I-DBSECCLO, 2 infobase sections closed
UPDSRV>
```

CLOSE/KEYWORD

Closes a VTX keyword file to the update server.

Format

CLOSE/KEYWORD *filename*

Parameter

filename
The name of the file to be closed. The file name you supply must be the same file name you specified when you opened the file. You are not required to specify the VTK file type. If you included a directory specification for the file in the OPEN command, you must also include it in the CLOSE command.

If you are unsure of the file name to use, issue the SHOW FILE/ALL command beforehand to see which files are open.

Description

The CLOSE/KEYWORD command closes a VTX keyword file to the update server.

Example

The following example closes the VTX keyword file SALES.VTK for update access.

```
UPDSRV> CLOSE SALES.VTK
UPDSRV>
```

CLOSE/PAGE

Closes a VTX page file to the update server.

Format

CLOSE/PAGE *filename*

Parameter

filename
The name of the VTX page file to be closed. The file name you supply must be the same file name you specified when you opened the file. You are not required to specify the VTD file type. If you included a directory specification for the file in the OPEN command, you must also include it in the CLOSE command. If you do not specify /PAGE, VTX assumes by default that the file to be closed is a page file.

If you are unsure of the file name to use, issue the SHOW FILE/ALL command beforehand to see which files are open.

Description

The CLOSE/PAGE command closes VTX page files to the update server. You do not need to include the /PAGE qualifier. VTX assumes you are closing a page file by default.

Example

The following example closes the VTX page file SALES to update server access.

```
UPDSRV> CLOSE SALES
UPDSRV>
```

EXIT

Lets you exit from update server mode.

Format

EXIT

Description

The EXIT command lets you finish your work in update server mode and returns you to control mode.

Example

The following example ends your work in update server mode and returns you to control mode in the VTXCTL Utility.

```
UPDSRV>  EXIT

CTL>
```

HELP

Lets you get help information for any update server mode command.

Format

HELP *[topic]*

Parameter

topic
One of a number of topics for which help is available. If you specify a topic, you will get a help display related to that topic. If you do not specify a topic, you will get a list of topics for which help is available.

Description

The HELP command lets you get help information for update server mode commands. The help available is similar to VMS help. You can ask for general help, or you can ask for help on specific topics and subtopics.

OPEN/KEYWORD

Opens a VTX keyword file for update server access.

Format

OPEN/KEYWORD *[/RANGE=(page-number,thru-page-number)] [filename]*

Parameter

filename
The name of the VTX keyword file to be opened. You are not required to specify the VTK file type. If the file is not in your SYS$LOGIN directory, you must include a directory specification with the file name. The update server looks for files in the SYS$LOGIN directory by default. If you do not include a file name, the update server tries to open VTXDATA.VTK as the default keyword file.

To have the specified file open to both a server and an update server, you must include the /SHARE qualifier with the OPEN/KEYWORD command at the SRV> prompt.

Qualifier

/RANGE=(page-number,thru-page-number)
Specifies a page range. If you specify a range, the update server searches only those keywords associated with that range. The number you use for the *page-number* must have a lower ASCII value than the *thru-page-number*, even though the *page-number* might be numerically higher than the *thru-page-number* value. For example, (1000,85) is valid; (85,1000) is not valid.

Description

The OPEN/KEYWORD command opens a VTX keyword file for update server access. The keyword file must be opened for modifications or updates to keyword files to be processed.

Examples

The following example opens the keyword file NEWSINT.VTK for access by the update server.

```
UPDSRV> OPEN/KEYWORD NEWSINT.VTK
UPDSRV>
```

The following example opens keywords in the VTX keyword file named MARKETING.VTK and associates with it the range 2 to 6*.

```
UPDSRV> OPEN/KEYWORD/RANGE=(2,6*) MARKETING.VTK
UPDSRV>
```

OPEN/PAGE

Opens a VTX page file for update server access.

Format

OPEN/PAGE *[/RANGE=(page-number,thru-page-number)] [filename]*

Parameter

filename
The name of the VTX page file to be opened. You are not required to specify the VTD file type. If the file is not in your SYS$LOGIN directory, you must include a directory specification with the file name. The update server looks for files in the SYS$LOGIN directory by default.

If you do not specify /PAGE, VTX assumes by default that the file to be opened is a page file. If you do not specify a file name, the server tries to open VTXDATA.VTD as the default page file.

To have the specified file open to both a server and an update server, you must include the /SHARE qualifier with the OPEN/PAGE command at the SRV> prompt.

Qualifier

/RANGE=(page-number, thru-page-number)
Specifies a page range for the file. *Page-number* indicates the first page in a range of pages. *Thru-page-number* indicates the last page in that range. The number you use for the *page-number* must have a lower ASCII value than the *thru-page-number*, even though the *page-number* might be numerically higher than the *thru-page-number*. For example, (1000,85) is valid; (85,1000) is not valid.

If you specify a range, the update server makes available only those pages that are within that range. For example, if you open a page file and specify that all pages from 0 to 2 be made available to information providers, VTX makes available 0 (including 099999999999) and 1 (including 199999999999), as well as 2 itself. If you specify 0,2*, you will get everything from 0 through 2, including 099999999999, 199999999999, and 299999999999; that is, all pages beginning with 0, 1, and 2.

Description

The OPEN/PAGE command opens a VTX page file for update server access. You do not need to specify the /PAGE qualifier in the command; VTX assumes you are opening a page file by default.

Examples

The following example opens the page file NEWSINT.VTD for access by the update server.

```
UPDSRV> OPEN/PAGE NEWSINT.VTD
UPDSRV>
```

The following example opens pages within the range of 2 to 5* in the VTX page file named NEWSINT.VTD for access by the update server.

```
UPDSRV>  OPEN/RANGE=(2,5*) NEWSINT.VTD
UPDSRV>
```

SHOW COMMUNICATION

Displays status information about update server communications. This command displays the DECnet object number under which the update server is running, as well as the number of DECnet communication links to the update server.

Format

SHOW COMMUNICATION *[/OUTPUT=filename]*

Qualifier

/OUTPUT=filename
Specifies a VMS file where you want the requested information written. If you do not use the /OUTPUT qualifier, the information is displayed on your terminal screen.

Description

The SHOW COMMUNICATION command displays status information about update server communications. This command displays the DECnet object number the update server is running under, as well as the number of DECnet communication links to the update server.

Example

The following command displays status information about update server communications.

```
UPDSRV> SHOW COMMUNICATION

                  Update Server is DECnet object number 146

1 communication link found

UPDSRV>
```

SHOW FILE

Displays status information about update server infobase files.

Format

SHOW FILE *{/NAME=filename | /ALL} [/OUTPUT=filename]*

Qualifiers

/NAME=filename
Specifies the name of the infobase file for which you want information displayed. When you specify a file name, you cannot use the /ALL qualifier.

/ALL
Displays information about all infobase files. When you use /ALL, you cannot specify a file name.

/OUTPUT=filename
Specifies a VMS file where you want the requested information written. If you do not use the /OUTPUT qualifier, the information is displayed on your terminal screen.

Description

The SHOW FILE command displays status information about update server infobase files. If you do not specify a file name, you must use the /ALL qualifier. When you specify a file name with this command, VTX displays the names and page number ranges of the specified file. If you use the /ALL qualifier, VTX displays information about all files currently open to the update server.

Example

The following command displays information about all infobase files currently open to the update server. The information indicates how many pages or keywords were inserted, extracted, or deleted by IPs since the files were opened.

```
UPDSRV>  SHOW FILE/ALL

Sec Type Low Key    High Key    Insert Extrct Delete     File Name
--- ---- -------- -------------- ------ ------ ------ -----------------
  4 Page 3        3~~~~~~~~~~~~~      0      0      0 [DORGAN]FILE3.VTD
  3 Page 4        4~~~~~~~~~~~~~      0      0      0 [DORGAN]FILE2.VTD
  2 Page 1        1~~~~~~~~~~~~~      0      0      0 [DORGAN]FILE1.VTD
  1 Key  0        9~~~~~~~~~~~~~      0      0      0 [DORGAN]KEY1.VTK

4 open infobase sections

UPDSRV>
```

SHOW SESSION

Displays status information about update server sessions.

Format

SHOW SESSION *{/ID=(session-id[,...]) | /ALL}*
[/OUTPUT=filename]

Qualifiers

/ID=session-id
Specifies one or more individual update server sessions. The *session-id* is a unique 20-character string with the following format:

```
nnnnn-PPPPPPPP-00000
```

The first field (nnnnn) is the decimal representation of the DECnet node from which the session originated. (For information on how to convert this field to area/node format, see Volume 5, Networking, in the *VMS System Management Subkit*.)

The second field (PPPPPPPP) is the hexadecimal VMS process ID number.

The third field (00000) is a decimal offset that distinguishes between sessions that originate from the same node and process ID. The VTXUPD Utility puts a value of zero in the offset field. A multiple-session VAX VTX/VALU RUSL application might put a nonzero value in the offset field.

You can omit leading zeros from each field when specifying a session identifier; for example, 4768-364-1. You can use VMS wildcard characters to specify session identifiers.

When you specify one or more session identifiers, you cannot use the /ALL qualifier.

/ALL
Displays information about all IP sessions. When you use the /ALL qualifier, you cannot specify a session identifier.

/OUTPUT=filename
Specifies a VMS file where you want the requested information written. If you do not use the /OUTPUT qualifier, the information is displayed on your terminal screen.

Description

The SHOW SESSION command displays status information about update server sessions.

When you include one or more session identifiers with this command, VTX displays information about the specified update server session(s). If you use the /ALL qualifier instead of specifying a session, VTX displays information about all information provider sessions currently connected to the update server.

Example

The following command displays information about an active update server session.

```
UPDSRV>  SHOW SESSION/ALL

     Session ID       Session Started            Account Name
------------------- ---------------- -------------------------------
3171-21E00317-0       9-MAY-1989 14:26 EDON1::VTXDORGAN
    Pages    inserted = 0,     extracted = 0,     deleted = 0
    Keywords inserted = 0,     extracted = 0,     deleted = 0

1 current session

UPDSRV>
```

START COMMUNICATION

Establishes the update server as a DECnet object.

Format

START COMMUNICATION *[/OBJECT=n]*

Qualifier

/OBJECT=n
Specifies a DECnet object number. You can enter any object number from 128 to 255. If you do not include the /OBJECT qualifier, VTX uses 56, the default DECnet object number for update servers.

NOTE

The default object number for update servers is the same as that for Workbench servers. If you run both an update server and a Workbench server simultaneously, give one of the servers an object number other than the default.

Description

The START COMMUNICATION command establishes the update server as a DECnet object. This allows IPs using the VTXUPD Utility to invoke the CONNECT command to connect to the update server.

Example

The following example establishes the update server as a DECnet object with object number 176.

```
UPDSRV> START COMMUNICATION/OBJECT=176
UPDSRV>
```

STOP COMMUNICATION

Stops update server communication links.

Format

STOP COMMUNICATION

Description

The STOP COMMUNICATION command stops update server communication links. This command restricts future communication links from being initiated, but leaves all current links active. To resume communication with the update server process, use the START COMMUNICATION command. The STOP COMMUNICATION command also removes the update server's DECnet object number from the list of active object numbers.

Example

The following example restricts future update server communication links from being established but leaves current links active.

```
UPDSRV> STOP COMMUNICATION
UPDSRV>
```

STOP SESSION

Stops active update server sessions.

Format

STOP SESSION *{/ID=(session-id[,...]) | /ALL}*

Qualifiers

/ID=session-id
Specifies one or more individual update server sessions. The *session-id* is a unique 20-character string with the following format:

```
nnnnn-PPPPPPPP-00000
```

The first field (nnnnn) is the decimal representation of the DECnet node from which the session originated. (For information on how to convert this field to area/node format, see Volume 5, Networking, in the *VMS System Management Subkit*.

The second field (PPPPPPPP) is the hexadecimal VMS process ID number.

The third field (00000) is a decimal offset that distinguishes sessions that originate from the same node and process ID. The VTXUPD Utility always puts a value of zero in the offset field, but VAX VTX/VALU RUSL applications can put nonzero values in the offset field.

You can omit leading zeros from each field when specifying a session identifier; for example, 4768-364-1. You can use VMS wildcard characters in the process ID and offset fields of a session identifier. When you specify one or more session identifiers, you cannot use the /ALL qualifier.

/ALL
Specifies that you want to stop all current update server sessions. If you use the /ALL qualifier, you cannot specify a session identifier.

Description

The STOP SESSION command stops active update server sessions. This command either stops the specified information provider session or sessions, or it stops all sessions if you use the /ALL qualifier.

Example

The following example stops all update server sessions and then restricts future links from being established until update server communication is started again.

```
UPDSRV> STOP SESSION/ALL
UPDSRV> STOP COMMUNICATION
UPDSRV>
```

2.10 Workbench Server Mode

From control mode, there are two ways to access Workbench server mode:

- If you do not have a Workbench server running under your group UIC, issue the START WORKBENCH_SERVER command.
- If you have a Workbench server running under your group UIC, issue the CONNECT WORKBENCH_SERVER command.

You use the Workbench server mode commands at the WBSRV> prompt to manage communications with a Workbench server. Table 2–7 summarizes the Workbench server commands.

The Workbench server uses the contents of the Workbench library to coordinate the activities of IPs as they update the VTX infobase from the Workbench Utility. A Workbench server is optional in a VTX configuration. For more information on the contents of the Workbench library, see Appendix D.

Table 2–7: VTXCTL Utility—Workbench Server Mode Commands

Command	Description
CLOSE/ALL	Closes all page and keyword files that are open to the Workbench server.
CLOSE/KEYWORD	Closes a keyword file that is open to the Workbench server.
CLOSE/LIBRARY	Closes the Workbench library files that are open to the Workbench server.
CLOSE/PAGE	Closes a page file that is open to the Workbench server.
EXIT	Exits from Workbench server mode.
HELP	Accesses online help information about Workbench server mode commands.
OPEN/KEYWORD	Opens a VTX keyword file for access by the Workbench server.
OPEN/LIBRARY	Opens a Workbench library for access by the Workbench server.

(continued on next page)

Table 2–7 (Cont.): VTXCTL Utility—Workbench Server Mode Commands

Command	Description
OPEN/PAGE	Opens a VTX page file for access by the Workbench server.
SHOW COMMUNICATION	Displays information about communication links.
SHOW FILE	Displays information about infobase files.
SHOW LIBRARY	Displays information about a Workbench library.
SHOW SESSION	Displays information about Workbench sessions.
START COMMUNICATION	Establishes the Workbench server as a DECnet object.
STOP COMMUNICATION	Stops the Workbench server from accepting incoming communication requests.
STOP SESSION	Stops active Workbench server sessions.

CLOSE/ALL

Closes all VTX page and keyword files currently open to the Workbench server.

Format

CLOSE/ALL

Description

The CLOSE/ALL command closes all VTX page and keyword files currently open to the Workbench server.

Example

The following example closes all infobase files (keyword and page files) currently open to the Workbench server.

```
WBSRV>  CLOSE/ALL
%VTX-I-DBSECCLO, 2 infobase sections closed
WBSRV>
```

CLOSE/KEYWORD

Closes a VTX keyword file to the Workbench server.

Format

CLOSE/KEYWORD *filename*

Parameter

filename
The name of the VTX keyword file to be closed. The file name you supply must be the same file name you specified when you opened the file. You are not required to specify the VTK file type. If you included a directory specification for the file in the OPEN command, you must also include it in the CLOSE/KEYWORD command.

If you are unsure of the file name to use, issue the SHOW FILE/ALL command beforehand to see which files are open.

Description

The CLOSE/KEYWORD command closes a VTX keyword file to the Workbench server.

Example

The following example closes the MARKETING.VTK keyword file currently open to the Workbench server.

```
WBSRV> CLOSE/KEYWORD MARKETING
WBSRV>
```

CLOSE/LIBRARY

Closes the currently open Workbench library.

Format

CLOSE/LIBRARY

Description

The CLOSE/LIBRARY command closes the files in the currently open Workbench library.

Example

The following example closes the currently open Workbench library.

```
WBSRV>  CLOSE/LIBRARY
WBSRV>
```

CLOSE/PAGE

Closes a VTX page file to the Workbench server.

Format

CLOSE/PAGE *filename*

Parameter

filename
The name of the VTX page file to be closed. The file name you supply must be the same file name you specified when you opened the file. You are not required to specify the VTD file type. If you do not specify the VTD file type or use the /PAGE qualifier, the file is assumed to be a page file by default. If you included a directory specification for the file in the OPEN command, you must also include it in the CLOSE command. If you do not specify /PAGE, VTX assumes by default that the file to be closed is a page file.

If you are unsure of the file name to use, issue the SHOW FILE/ALL command beforehand to see which files are open.

Description

The CLOSE/PAGE command closes a VTX page file to the Workbench server. You do not need to include the /PAGE qualifier. VTX assumes you are closing a page file by default.

Example

The following example closes the VTX page file PERSONNEL.VTD for Workbench server access.

```
WBSRV>  CLOSE PERSONNEL
WBSRV>
```

EXIT

Lets you exit from Workbench server mode.

Format

EXIT

Description

The EXIT command lets you finish your work in Workbench server mode and returns you to control mode.

Example

The following example ends your work in Workbench server mode and returns you to control mode in the VTXCTL Utility.

```
WBSRV>  EXIT

CTL>
```

HELP

Lets you get help information for any Workbench server mode command.

Format

HELP *[topic]*

Parameter

topic
One of a number of topics for which help is available. If you specify a topic, you will get a help display related to that topic. If you do not specify a topic, you will get a list of topics for which help is available.

Description

The HELP command lets you get help information for Workbench server mode commands. The help available is similar to VMS help. You can ask for general help, or you can ask for help on specific topics and subtopics.

OPEN/KEYWORD

Opens a VTX keyword file for access by the Workbench server.

Format

OPEN/KEYWORD *[/RANGE=(page-number, thru-page-number)] [filename]*

Parameter

filename
The name of the VTX keyword file to be opened. You are not required to specify the VTK file type. If the file is not in your SYS$LOGIN directory, you must include a directory specification with the file name. The Workbench server looks for files in the SYS$LOGIN directory by default. If you do not include a file name, the Workbench server tries to open VTXDATA.VTK as the default keyword file.

To have the specified file open to both a VTX server and a Workbench server, you must include the /SHARE qualifier with the OPEN/KEYWORD command at the SRV> prompt.

Qualifier

/RANGE=(page-number, thru-page-number)
Specifies a page range. If you specify a range, the Workbench server searches only those keywords associated with that range. The number you use for the *page-number* must have a lower ASCII value than the *thru-page-number*, even though the *page-number* might be numerically higher than the *thru-page-number* value. For example, (1000,85) is valid; (85,1000) is not valid.

Description

The OPEN/KEYWORD command opens a VTX keyword file for access by the Workbench server. The keyword file must be opened for update operations from Workbench IPs to be processed.

Examples

The following example opens the keyword file NEWSINT.VTK for access by the Workbench server.

```
WBSRV>  OPEN/KEYWORD NEWSINT.VTK
WBSRV>
```

The following example opens the keyword file MARKETING.VTK for access by the Workbench server. Because the file is not in SYS$LOGIN, a directory specification [SMITHSON] precedes the file name.

```
WBSRV>  OPEN/KEYWORD [SMITHSON]MARKETING.VTK
WBSRV>
```

The following example opens keywords in the VTX keyword file named SALES.VTK and associates with it the range 0 to 6*.

```
WBSRV> OPEN/KEYWORD/RANGE=(0,6*) SALES.VTK
WBSRV>
```

OPEN/LIBRARY

Creates, or opens, the Workbench library.

Format

OPEN/LIBRARY *[directory-specification]*

Parameter

directory-specification
The name of the VMS directory where the Workbench library files reside. If you do not specify a directory, the Workbench server tries to open the files in SYS$LOGIN. If the files do not exist in the specified directory, the Workbench server creates them.

Description

The OPEN/LIBRARY command creates, or opens, the Workbench library. The Workbench library consists of a set of files that the Workbench server uses to maintain the VTX infobase files specified by the OPEN/PAGE and OPEN/KEYWORD commands. The Workbench library must be opened for Workbench IPs to fetch and modify existing pages or update the VTX infobase.

Example

The following example opens the Workbench library in the directory named [WORKBENCHLIB] for access by the Workbench server.

```
WBSRV> OPEN/LIBRARY [WORKBENCHLIB]
WBSRV>
```

OPEN/PAGE

Opens a VTX page file for access by the Workbench server.

Format

OPEN/PAGE *[/RANGE=(page-number,thru-page-number)] [filename]*

Parameter

filename
The name of the VTX page file to be opened. You are not required to specify the VTD file type. If the file is not in your SYS$LOGIN directory, you must include a directory specification with the file name. The Workbench server looks for files in the SYS$LOGIN directory by default.

If you do not specify /PAGE, VTX assumes by default that the file to be opened is a page file. If you do not specify a file name, the server tries to open VTXDATA.VTD as the default page file.

To have the specified file open to both a VTX server and a Workbench server, you must include the /SHARE qualifier with the OPEN/PAGE command at the SRV> prompt.

Qualifier

/RANGE=(page-number, thru-page-number)
Specifies a page range for the file. *Page-number* indicates the first page in a range of pages. *Thru-page-number* indicates the last page in that range. The number you use for the *page-number* must have a lower ASCII value than the *thru-page-number*, even though the *page-number* might be numerically higher than the *thru-page-number*. For example, (1000,85) is valid; (85,1000) is not valid.

If you specify a page range, the Workbench server opens only those pages whose numbers are within the specified range. For example, if you open a page file and specify that all pages from 0 to 2 be made available to Workbench IPs, VTX makes available all pages beginning with 0 (including 099999999999) and 1 (including 199999999999), as well as 2 itself. If you specify 0,2*, you will get every page from 0 through 2, including 099999999999, 199999999999, and 299999999999; that is, all pages beginning with 0, 1, and 2.

Description

The OPEN/PAGE command opens a VTX page file for access by the Workbench server. The page file must be opened for update operations from Workbench IPs to be processed. You do not need to specify the /PAGE qualifier in the command.

Examples

The following example opens the page file NEWSINT.VTD for access by the Workbench server.

```
WBSRV> OPEN/PAGE NEWSINT.VTD
WBSRV>
```

The following example opens the file, MARKETING.VTD, that is not in the SYS$LOGIN directory. Notice that a directory specification [CINELLI] precedes the file name.

```
WBSRV> OPEN/PAGE [CINELLI]MARKETING.VTD
WBSRV>
```

The following example opens pages within the range of 0 to 9* in the page file named MAIN.VTD for access by the Workbench server.

```
WBSRV> OPEN/RANGE=(0,9*) MAIN.VTD
WBSRV>
```

SHOW COMMUNICATION

Displays status information about a Workbench server process.

Format

SHOW COMMUNICATION *[/OUTPUT=filename]*

Qualifier

/OUTPUT=filename
Specifies a VMS file where you want the requested information written. If you do not use the /OUTPUT qualifier, the information is displayed on your terminal screen.

Description

The SHOW COMMUNICATION command displays status information about a Workbench server process. The information displayed includes the DECnet object number the Workbench server is running under, as well as a count of DECnet links to the Workbench server.

Example

The following command writes information about Workbench server communication to the file WBCOMMFILE.VTX. This information includes the DECnet object number the Workbench server is running under, as well as a count of DECnet links to the Workbench server.

```
WBSRV> SHOW COMMUNICATION/OUTPUT=WBCOMMFILE.VTX
WBSRV>
```

SHOW FILE

Displays status information about the infobase files open to the Workbench server.

Format

SHOW FILE *{/NAME=filename | /ALL} [/OUTPUT=filename]*

Qualifiers

/NAME=filename
Specifies the name of the infobase file for which you want information displayed. When you specify a file name, you cannot use the /ALL qualifier.

/ALL
Displays information about all infobase files currently open to the Workbench server. When you use the /ALL qualifier, you cannot specify a file name.

/OUTPUT=filename
Specifies a VMS file where you want the requested information written. If you do not use the /OUTPUT qualifier, the information is displayed on your terminal screen.

Description

The SHOW FILE command displays status information about the infobase files open to the Workbench server. If you do not specify a file name, you must use the /ALL qualifier. When you specify a file name with this command, VTX displays the names and page number ranges of the specified file. If you use the /ALL qualifier, VTX displays information about all infobase files currently open to the Workbench server.

Example

The following command writes information about the infobase files to the file WBFILE.VTX.

```
WBSRV> SHOW FILE/OUTPUT=WBFILE.VTX/ALL
WBSRV>
```

SHOW LIBRARY

Displays status information about a Workbench library.

Format

SHOW LIBRARY *[/OUTPUT=filename]*

Qualifier

/OUTPUT=filename
Specifies a VMS file where you want the requested information written. If you do not use the /OUTPUT qualifier, the information is displayed on your terminal screen.

Description

The SHOW LIBRARY command displays status information about a Workbench library. This command displays the directory specification of the Workbench library if a library is open. If the Workbench library is not open, you receive a message informing you so.

Example

The following example displays information about the open Workbench library, and then closes the library and issues another SHOW LIBRARY command that causes a warning message.

```
WBSRV> SHOW LIBRARY
Workbench server library directory is SYS$SYS:[FROST]
WBSRV> CLOSE/LIBRARY
WBSRV> SHOW LIBRARY
%VTX-W-LIBNOTOPN, Workbench library is not open
WBSRV>
```

SHOW SESSION

Displays status information about Workbench server sessions.

Format

SHOW SESSION *{/ID=(session-id[,...]) | /ALL}*
[/OUTPUT=filename]

Qualifiers

/ID=session-id
Specifies one or more individual Workbench server sessions. The *session-id* is a unique 20-character string with the following format:

```
nnnnn-PPPPPPPP-00000
```

The first field (nnnnn) is the decimal representation of the DECnet node from which the session originated. (For information on how to convert this field to area/node format, see Volume 5, Networking, in the *VMS System Management Subkit*.

The second field (PPPPPPPP) is the hexadecimal VMS process ID number.

The third field (00000) is a decimal offset that distinguishes between sessions that originate from the same node and process ID. The offset value for Workbench sessions is always 00000.

You can omit leading zeros from each field when specifying a session identifier; for example, 4768-364-0. You can specify VMS wildcard characters for the process ID and offset fields of a session identifier. When you specify one or more session identifiers, you cannot use the /ALL qualifier.

/ALL
Displays information about all Workbench IP sessions. When you use the /ALL qualifier, you cannot specify a session identifier.

/OUTPUT=filename
Specifies a VMS file where you want the requested information written. If you do not use the /OUTPUT qualifier, the information is displayed on your terminal screen.

Description

The SHOW SESSION command displays status information about Workbench server sessions.

A Workbench server session is established when the Workbench Utility issues an IP request that requires the use of the Workbench server. The session then remains established until the Workbench IP exits from the Workbench Utility.

When you include one or more session identifiers with this command, VTX displays information about the specified Workbench server session(s). If you use the /ALL qualifier instead of specifying a session, VTX displays information about all active Workbench sessions.

Example

The following command sends information about all active Workbench sessions to the file WBMAY19.VTX.

```
WBSRV> SHOW SESSION/ALL/OUTPUT=WBMAY19.VTX
WBSRV>
```

START COMMUNICATION

Establishes the Workbench server as a DECnet object.

Format

START COMMUNICATION *[/OBJECT=n]*

Qualifier

/OBJECT=n
Specifies a DECnet object number. You can enter any object number from 128 to 255. If you do not include the /OBJECT qualifier, VTX uses 56, the default DECnet object number for Workbench servers.

NOTE

The default object number for Workbench servers is the same as that for update servers. If you run a Workbench server and an update server simultaneously, give one of the servers an object number other than the default.

Description

The START COMMUNICATION command establishes the Workbench server as a DECnet object, enabling two-way communication between the Workbench server and Workbench IPs running the Workbench Utility.

Example

The following example establishes the Workbench server as a DECnet object with object number 174.

```
WBSRV> START COMMUNICATION/OBJECT=174
WBSRV>
```

STOP COMMUNICATION

Stops Workbench server communication links.

Format

STOP COMMUNICATION

Description

The STOP COMMUNICATION command stops Workbench server communication links. This command restricts future communication links from being initiated and leaves all current links active. To resume communication with the Workbench server process, use the START COMMUNICATION command. The STOP COMMUNICATION command also removes the Workbench server's DECnet object number from the list of active object numbers.

Example

The following example restricts future Workbench server communication links from being established but leaves current links active.

```
WBSRV> STOP COMMUNICATION
WBSRV>
```

STOP SESSION

Stops active Workbench server sessions.

Format

STOP SESSION *{/ID=(session-id[,...]) | /ALL}*

Qualifiers

/ID=session-id
Specifies one or more individual Workbench server sessions. The *session-id* is a unique 20-character string with the following format:

```
nnnnn-PPPPPPPP-00000
```

The first field (nnnnn) is the decimal representation of the DECnet node from which the session originated. (For information on how to convert this field to area/node format, see Volume 5, Networking, in the *VMS System Management Subkit*.

The second field (PPPPPPPP) is the hexadecimal VMS process ID number.

The third field (00000) is a decimal offset that distinguishes between sessions that originate from the same node and process ID. The offset value for Workbench sessions is always 00000.

You can omit leading zeros from each field when specifying a session identifier; for example, 4768-364-0. You can specify VMS wildcard characters for the process ID and offset fields of session identifiers. When you specify one or more session identifiers, you cannot use the /ALL qualifier.

/ALL
Specifies that you want to stop all current Workbench server sessions. If you use the /ALL qualifier, you cannot specify a session identifier.

Description

The STOP SESSION command stops active Workbench server sessions. This command either stops the specified Workbench session or sessions, or it stops all sessions if you use the /ALL qualifier.

Example

The following example stops all Workbench server sessions and then restricts future links from being established until Workbench server communication is started again.

```
WBSRV> STOP SESSION/ALL
WBSRV> STOP COMMUNICATION
WBSRV>
```

Chapter 3

VTX Account Control Utility

This chapter explains the tasks you must complete to manage VTX accounts and describes the VTX Account Control Utility (VTXACU) commands. This chapter also:

- Describes some preliminary subscriber, VTXUPD IP, and VAX VTX Workbench IP account tasks
- Explains how to ensure system security, including how to use the base page determination file
- Explains how to start the VTXACU Utility

3.1 Managing VTX Accounts

As the VTX operator, you are the person who is primarily responsible for controlling access to the VTX infobase. Your responsibilities include:

- Setting up and maintaining all subscriber accounts, information provider (IP) accounts, and Workbench IP accounts for the VTX system
- Making sure that appropriate IP accounts and Workbench IP accounts are authorized to update VTX infobase pages
- Maintaining a base page determination file and designate a base page for each subscriber
- Setting up guest accounts
- Setting up page prefixes for the Workbench Utility

To create, remove, change, or display VTX subscriber accounts, IP accounts, or Workbench IP accounts, you use the VTX Account Control Utility (VTXACU). All VTX account information is kept in the account file VTXACF.VTA. The information in the account file determines whether or not people who try to log in to your VTX service will be allowed access.

All Workbench page prefixes are kept in the prefix file of the Workbench library. The information in the page prefix file is used by the Workbench server to generate page numbers for pages created by Workbench IPs.

3.2 Preliminary Subscriber Account Tasks

A typical VTX subscriber account requires the TMPMBX and NETMBX privileges. In addition, a subscriber account requires the following quotas:

AST limit (ASTLM)—8
Buffered I/O limit (BIOLM)—8
Buffered I/O byte count (BYTLM)—10000
Direct I/O limit (DIOLM)—6
Enqueue limit (ENQLM)—10
Open file limit (FILLM)—3
Timer queue event limit (TQELM)—8

3.3 Preliminary IP Account Tasks

Certain quotas must be set for the IP account where the VTX Update Utility (VTXUPD) runs. The system manager runs the VMS Authorize Utility to set or change the quotas. The required quotas depend on the number of files you expect to open through the VTXCTL Utility. Use the following formulas to determine the required quotas for the IP accounts:

```
DIOLM = (number of files open simultaneously) + 10
ENQLM = (sum of multibuffer counts in use, default per file = 2) + 10
FILLM = (number of files open simultaneously) + 5
```

All other quotas should be adequate for the VTXUPD Utility at their default settings.

3.4 Preliminary Workbench IP Account Tasks

Each Workbench IP's account must have a VMS page file quota (PGFLQUO) of at least 12000. If the page file quota is too low, VMS displays the system error message *insufficient virtual memory* when a Workbench IP first issues the VTX/WORKBENCH command. Use the VMS Authorize Utility to check the value of this quota and modify it if necessary.

3.5 Providing VTX System Security

It is important that VTX operators and information providers establish a consistent approach to system security during the infobase design stage. There are two ways to make privileged information secure:

- Closed user groups

  Closed user group numbers let you restrict page access to a specified group of subscribers. The VTX operator can assign a subscriber to one or more closed user groups. The information provider then assigns a closed user group number to pages containing privileged information. If a page has a closed user group number assigned to it, only subscribers who are assigned that closed user group number can read that page.

- Base page entry in the base page determination file

  The base page entry controls the subscriber's point of entry into VTX. Using a base page entry, you can specify which sections of the infobase a subscriber or class of subscribers can see. You can determine a subscriber's base page by criteria such as the subscriber's name, language preference, the node from which the subscriber logs in to a VTX service, and the type of terminal that a subscriber uses. For more information on base pages, see Section 3.11.

3.6 Starting the VTX Account Control Utility

To start the VTXACU Utility, enter the following command at the DCL prompt:

```
$ RUN SYS$SYSTEM:VTXACU
```

The first time you run the VTXACU Utility, an account file does not exist. VTXACU will prompt you to ask if you want to create one:

```
Do you want to create a new account file?
```

Enter Y for yes to create a new account file.

After the command is executed, your terminal displays the following:

```
Account file VTXACF.VTA has been created.
ACU>
```

The ACU> prompt indicates that you have started the VTXACU Utility and can now issue commands specific to the utility. This chapter describes each of the VTXACU Utility commands. The commands are grouped as follows:

- General commands
- Subscriber account commands
- VTXUPD IP account commands
- Workbench IP account commands
- Workbench prefix file commands

The next section explains the VTXACU Utility general commands. Table 3–1 summarizes these commands. Explanations of the other VTXACU Utility commands follow the general commands.

The VTXACU Utility should be run from the same directory as the VTXCTL Utility so that the server, update server, and Workbench server will be able to find the VTXACF.VTA file.

Table 3–1: VTXACU Utility—General Commands

Command	Description
EXIT	Exits from the VTXACU Utility.
HELP	Accesses online help information about VTXACU commands.

EXIT

Lets you exit from the VTXACU Utility.

Format

EXIT

Description

The EXIT command lets you exit from the VTXACU Utility and returns you to DCL level.

If you modified the file VTXACF.VTA during your ACU session, you are notified of the modification before you are returned to the DCL prompt. If you did not modify the file, you will receive a message saying that the account file has not been modified.

If you made changes to a VTX account while the user (subscriber, information provider, or Workbench IP) was using VTX, the changes do not become effective until the next time the user accesses the associated server.

Example

The following example completes a session with the VTXACU utility and returns you to the DCL prompt.

```
ACU> EXIT
VTXACF.VTA account file successfully modified.
$
```

HELP

Displays help text about the commands available in the VTXACU Utility.

Format

HELP *[topic]*

Parameter

topic
One of a number of topics for which help is available. If you specify a topic, you will get a help display related to that topic. If you do not specify a topic, you will get a list of topics for which help is available.

Description

The HELP command lets you get help information for all VTXACU Utility commands. The help available is similar to VMS help. You can ask for general help, or you can ask for help on specific topics and subtopics.

3.7 Subscriber Account Commands

You use the VTXACU Utility subscriber account commands to manage VAX VTX subscriber accounts. Management tasks include adding, deleting, and modifying accounts, as well as monitoring subscriber account usage.

Table 3–2 summarizes the subscriber account commands.

Table 3–2: VTXACU Utility—Subscriber Account Commands

Command	Description
ADD	Adds a subscriber account to the account file.
DELETE	Removes a subscriber account from the account file.
MODIFY	Changes the account file record for a subscriber account.
RESET	Resets account file records for a subscriber account.
SHOW	Displays usage information for a subscriber account.

ADD

Adds a subscriber account to the account file.

Format

ADD *[node::]username [qualifier [...]]*

Parameters

node
A one- to six-character DECnet specification indicating the network node that the subscriber logs in to the VTX service from. If you do not specify a node, the default node is the translation of the logical name SYS$NODE (local node). The network node can also be a VAX cluster alias name or an asterisk (*) as a wildcard character. The cluster alias indicates that the subscriber (username) can run VTX from any node on the specified VAX cluster. The asterisk indicates that the subscriber can run VTX from any node.

username
A 1- to 30-character alphanumeric username, or %GUEST% for a guest account. You can also enter an asterisk as a wildcard character in place of a username. The asterisk indicates that any subscriber can run VTX from the specified node. The combined node and username string must not exceed 32 characters. You do not need a node name when entering the username %GUEST%.

Qualifiers

/[NO]GROUP=(group-num[,...])
Specifies one or more closed user group numbers. You can control subscriber access to infobase pages by means of closed user groups. Subscribers must have a closed user group entry in the account file to access pages in that closed user group. The VTXACU Utility allows a subscriber to belong to up to 4095 groups, with group numbers ranging from 1 to 4095 inclusive.

(Group number 4095 can access any page regardless of the group number assigned to a page.)

The /NOGROUP qualifier indicates that no group numbers are being defined for the subscriber. It is the default. Group number 0 is set by default for all VTX subscriber accounts except those for which you specify /NOGROUP.

/LANGUAGE=language-specifier
Specifies a subscriber's language preference. The language preference is one of five criteria you can use to determine a subscriber's base page, or entry point, when the subscriber logs in to VTX. Language specifiers include English, French, German, Italian, Spanish, and Swedish. If you do not specify a language preference when adding an account, English is chosen by default.

/PASSWORD=password
Specifies a password for the new account. A password is required only when the subscriber uses a login page to access VTX. For information about when a subscriber is presented with a login page, see the information on server account determination in Chapter 1 and the LOAD BASE command (/MAXTRY qualifier) in Chapter 2.

The password consists of 1 to 32 ASCII characters. Allowable characters include the letters A to Z, the numerals 0 to 9, the dollar sign ($), and the underscore (_).

/USER_DATA=user-string
Specifies a *user-string* of up to 128 bytes and 10 fields. Used only for external applications. The fields in the string are separated by asterisks (*). For more information, see the description of the ELK$_KF_OUTPUT_FORMDEF message in the *VAX VTX/VALU Guide to Using ELK.*

Description

The ADD command lets you add a subscriber account to the account file.

Examples

The following example adds a subscriber named QUIMBINGER to the account file. The account is assigned group numbers 3 and 5, and a French language preference. It is assumed, by default, that QUIMBINGER will log in to VTX from the local node.

```
ACU> ADD QUIMBINGER/GROUP=(3,5)/LANGUAGE=FRENCH
Account successfully added
ACU>
```

The following example adds a subscriber named WHATMA to the account file. The node name JTW is a cluster alias for a VAX cluster that includes three nodes. WHATMA can log in to VTX from any one of the three nodes. The account is assigned the password IMHERE.

```
ACU> ADD JTW::WHATMA/PASSWORD=IMHERE
Account successfully added
ACU>
```

DELETE

Removes a VTX subscriber account from the account file.

Format

DELETE *[node::]username*

Parameters

node
A one- to six-character DECnet specification, or an asterisk (*) as a wildcard character, indicating the network node for the subscriber account you want to delete. If you do not specify a node, the default node is the translation of the logical name SYS$NODE (local node).

username
A 1- to 30-character alphanumeric username, an asterisk as a wildcard character, or %GUEST% for a guest account. The combined node and username string must not exceed 32 characters.

Description

The DELETE command removes a VTX subscriber account from the account file. Once a subscriber account is removed from the account file, all accounting information for the account is lost.

Example

The following example removes the subscriber account named MAELSTROM from the local node.

```
ACU> DELETE MAELSTROM
Account successfully deleted
ACU>
```

MODIFY

Changes selected information in a VTX subscriber account.

Format

MODIFY *[node::]username [qualifier [...]]*

Parameters

node
A one- to six-character DECnet specification, or an asterisk (*) as a wildcard character, indicating the network node for the subscriber account you want to modify. If you do not specify a node, the default node is the translation of the logical name SYS$NODE (local node).

username
A 1- to 30-character alphanumeric username, an asterisk as a wildcard character, or %GUEST% for a guest account. The combined node and username string must not exceed 32 characters.

Qualifiers

/[NO]GROUP[=(group-num[,...])]
Specifies one or more closed user group numbers. You can control subscriber access to infobase pages by means of closed user groups. Subscribers must have a closed user group entry in the account file to access pages in that closed user group. The VTXACU Utility allows a subscriber to belong to up to 4095 groups, with group numbers ranging from 1 to 4095 inclusive. (Group number 4095 can access any page regardless of the group number assigned to a page.)

Without a list of group numbers, the /NOGROUP qualifier removes *all* group numbers currently assigned to this account. With a list of numbers, it revokes previously defined group numbers from the subscriber. If you specify a group number that was not previously defined for the subscriber, an error message is reported and the command is aborted. You cannot remove access to group number 0.

/LANGUAGE=language-specifier
Specifies a new language preference for the user profile. Language specifiers include English, French, German, Italian, Spanish, and Swedish. The user profile is used to determine a subscriber's base page, or entry point, when the subscriber logs in to VTX. For more information on base pages, see Section 3.11.

/[NO]PASSWORD [=password]
Specifies a password for the account. A password is required only when the subscriber uses a login page to access VTX. For information about when a subscriber is presented with a login page, see the information on server account determination in Chapter 1 and the LOAD BASE command (/MAXTRY qualifier) in Chapter 2.

The password consists of 1 to 32 ASCII characters. Allowable characters include the letters A to Z, the numerals 0 to 9, the dollar sign ($), and the underscore (_).

/USER_DATA=user-string
Specifies a user-string of up to 128 bytes and 10 fields and is used only for external applications. The fields in the string are separated by asterisks (*). For more information, see the description of the ELK$KF_OUTPUT_FORMDEF message in the *VAX VTX/VALU Guide to Using ELK.*

Description

The MODIFY command lets you change selected information in a VTX subscriber account.

Example

The following example modifies the QUIMBINGER account on the local node. The MODIFY command replaces group numbers 3 and 5 with 4.

```
ACU> MODIFY QUIMBINGER/NOGROUP=(3,5)
Account successfully modified
ACU> MODIFY QUIMBINGER/GROUP=4
Account successfully modified
ACU>
```

The parentheses are optional if only one group code is specified.

RESET

Writes a subscriber's cumulative account statistics to a log file.

Format

RESET *{[node::]username|/ALL} [qualifier[...]]*

Parameters

node
A one- to six-character DECnet specification, or an asterisk (*) as a wildcard character, indicating the network node for the subscriber account you want to reset. If you do not specify a node, the default node is the translation of the logical name SYS$NODE (local node).

username
A 1- to 30-character alphanumeric username, an asterisk as a wildcard character, or %GUEST% for a guest account. The combined node name and username cannot exceed 32 characters. If you specify a username, you cannot use the /ALL qualifier.

Qualifiers

/ALL
Resets statistics for all subscriber accounts. If you use the /ALL qualifier, you cannot specify a username.

/[NO]LOG
Specifies whether or not previous account values will be logged in the file VTXACF.VTL located in the current directory. The default is /LOG. Use the /NOLOG qualifier to disable logging of previous account values. You cannot use /OUTPUT with /NOLOG.

/OUTPUT=filename
Specifies the name of the file where the previous account statistics are to be logged. The /OUTPUT qualifier cannot be used with the /NOLOG qualifier.

Use the /OUTPUT qualifier only if you want to log account values in a file other than the default file VTXACF.VTL.

Description

The RESET command writes a subscriber's cumulative account statistics to a log file. This command, which can be used for billing purposes, resets cumulative subscriber account statistics to zero.

By default, the RESET command causes previous values for the account to be logged in the file VTXACF.VTL. VTXACF.VTL is a sequential access file consisting of zero or more variable length records. Each record consists of a VTX account name, a record type, and several pieces of VTX account usage information. For each subscriber account record, the usage information indicates:

- Number of VTX pages accessed
- Number of VTX logins
- Date of last VTX login
- Date when the account was last reset
- Total connect time (the cumulative amount of time the account has used VTX since the account statistics were reset)

For every RESET command you issue, one or more usage records are created in the log file. For instance, if you issue the RESET/ALL command twice in a row on a 25-subscriber account file, 50 new usage records will exist in the VTXACF.VTL log file, two records for each account.

Appendix B describes the characteristics of each of the 18 possible fields in a VTXACF.VTL account usage record.

Example

The following example resets usage statistics for all VTX subscriber accounts in the VTX account file. The command also specifies that the old statistics are to be logged in the file MAY21.VTL.

```
ACU> RESET/ALL/OUTPUT=MAY21.VTL
Account usage statistics successfully reset
ACU>
```

SHOW

Displays account information about one or more subscriber accounts.

Format

SHOW *{[node::]username|/ALL} [qualifier]*

Parameters

node
A one- to six-character DECnet specification, or an asterisk (*) as a wildcard character, indicating the network node for the subscriber account on which you want to display information. If you do not specify a node, the default node is the translation of the logical name SYS$NODE (local node).

username
A 1- to 30-character alphanumeric username, an asterisk as a wildcard character, or %GUEST% for a guest account. The combined node and username string must not exceed 32 characters.

Qualifiers

/ALL
Displays account information for all subscriber accounts.

/OUTPUT=filename
Specifies that you want the information written to the designated file rather than displayed on your terminal.

Description

The SHOW command displays account information about one or more subscriber accounts. If you do not specify a username, you must use the /ALL qualifier.

Example

The following example displays information about all VTX subscriber accounts.

```
ACU> SHOW/ALL

Account:  BOSTON::MAELSTROM              Language:  GERMAN
Type:     Subscriber
Groups:       0    8   10
Last Login:  none                        Connect Time:    0 00:00:00.00
Last Reset:  11-NOV-1989 14:50:51.91     Sessions:        0
Requests:    0

Account:  PARIS::QUIMBINGER              Language:  FRENCH
Type:     Subscriber
Groups:       0    14   16   18   20
Last Login:  none                        Connect Time:    0 00:00:00.00
Last Reset:   2-AUG-1989 14:50:15.09     Sessions:        0
Requests:    0

Account:  LONDON::SHAKESPEARE            Language:  ENGLISH
Type:     Subscriber
Groups:       0    9   17    21
Last Login:  none                        Connect Time:    0 00:00:00.00
Last Reset:   2-AUG-1989 09:15:03.36     Sessions:        0
Requests:     0

ACU>
```

3.8 VTXUPD IP Account Commands

You use the VTXUPD IP account commands to manage accounts for information providers using the VTX Update Utility. Management tasks include adding, deleting, and modifying accounts, as well as monitoring information providers' account usage.

Table 3–3 summarizes the VTXUPD IP account commands.

Table 3–3: VTXACU Utility—VTXUPD IP Account Commands

Command	Description
ADD/IP	Adds a VTXUPD IP account to the account file.
DELETE/IP	Removes a VTXUPD IP account from the account file.
MODIFY/IP	Changes the account file record for a VTXUPD IP account.
RESET/IP	Resets account file records for a VTXUPD IP account.
SHOW/IP	Displays usage information for a VTXUPD IP account.

ADD/IP

Adds a VTXUPD information provider account to the account file.

Format

ADD/IP *[node::]username [qualifier [...]]*

Parameters

node
A one- to six-character DECnet specification indicating the network node on which the IP runs the VTXUPD Utility. If you do not specify a node, the default node is the translation of the logical name SYS$NODE (local node). The network node can also be a VAX cluster alias name or an asterisk (*) as a wildcard character. The cluster alias indicates that the information provider (username) can run the VTXUPD Utility from any node on the specified VAX cluster. The asterisk indicates that the IP can run the VTXUPD Utility from any node.

username
A 1- to 30-character alphanumeric username. The combined node and username string must not exceed 32 characters. You can also enter an asterisk as a wildcard character in place of a username. The asterisk indicates that any information provider can run the VTXUPD Utility from the specified node.

Qualifiers

/PASSWORD=password
Specifies an optional password for the new account. If you specify a password for an IP account, the IP must enter that password when using the CONNECT command at the UPD> prompt or when selecting the CONNECT command in VTXUPD utility menu mode. The password consists of 1 to 32 ASCII characters. Allowable characters include the letters A to Z, the numerals 0 to 9, the dollar sign ($), and the underscore (_).

/[NO]READ [=(page-range [,...])]
Allows the IP to extract pages in the infobase. If you do not specify a page range, full read access is granted to the IP. If you do not include /READ, the IP has no read access to any page in the infobase.

In the VTXACU Utility, a page range is defined either as an individual page number or as a collection of continuous page numbers. When a page range has more than one page, the lower page number must be listed first, followed by a hyphen, followed by the higher page number. Separate page ranges by commas, and enclose the string of ranges in parentheses. If you specify only one page range, you can omit the parentheses. VTXACU allocates up to 100 page ranges for an IP. You can distribute these ranges in any manner between the READ and WRITE modes of IP access, using the /READ and /WRITE qualifiers.

/[NO]WRITE [=(page-range [,...])]
Allows the IP to add, delete, and modify pages in the infobase. If you do not specify a page range, full write access is granted to the IP. If you do not include /WRITE, the IP has no write access to any page in the infobase. For an explanation of page ranges and how to use them in the VTXACU Utility, see the explanation of the /READ qualifier.

Description

The ADD/IP command adds a VTXUPD IP account to the account file. To update an infobase from VTXUPD using the update server on the infobase's local node, an IP on a remote node or on the local node needs an IP account on the node where the infobase resides.

To add a Workbench IP account to the account file, use the ADD/IP=WORKBENCH command explained later in this chapter.

Examples

The following example adds IP BELLEFLOWER, allowing full read but no write access. It is assumed by default that BELLEFLOWER will log in to VTX from the local node.

```
ACU> ADD/IP BELLEFLOWER/READ/NOWRITE
Account successfully added
ACU>
```

The following example adds IP BODROG, allowing read access to pages 356, 531, and 7. The VTXACU Utility considers each of these pages to be a separate page range so the string of page ranges is enclosed in parentheses.

```
ACU> ADD/IP BODROG/READ=(356,531,7)
Account successfully added
ACU>
```

The following example adds IP DORPAT, allowing read access to all pages in the range 345-400. This includes page 400. Note that because there is only one page range, the parentheses are omitted.

```
ACU> ADD/IP DORPAT/READ=345-400
Account successfully added
ACU>
```

The following example adds IP KARPAT, allowing write access to all the pages in the range 345-400*, including any page that starts with the number 400.

```
ACU> ADD/IP KARPAT/WRITE=345-400*
Account successfully added
ACU>
```

The following example adds IP MAGNOLIA, allowing write access to page 2301, page 39014, all the pages in the range 4000-6004 (including page 6004), and all pages in the range 667788-701122*, including any page that starts with the number 701122.

```
ACU> ADD/IP MAGNOLIA/WRITE=(2301, 39014, 4000-6004, 667788-701122*)
Account successfully added
ACU>
```

The following example adds IP DENDRON, allowing full read and write access. The node name RHODO is a cluster alias for a VAX cluster that includes three nodes. DENDRON can log in to VTXUPD from any one of the three nodes. The account is assigned the password AZALEA.

```
ACU> ADD/IP RHODO::DENDRON/READ/WRITE/PASSWORD=AZALEA
Account successfully added
ACU>
```

DELETE/IP

Removes a VTXUPD IP account from the account file.

Format

DELETE/IP *[node::]username*

Parameters

node
A one- to six-character DECnet specification, or an asterisk (*) as a wildcard character, indicating the network node for the IP account you want to delete. If you do not specify a node, the default node is the translation of the logical name SYS$NODE (local node).

username
A 1- to 30-character alphanumeric username or an asterisk as a wildcard character. The combined node and username string must not exceed 32 characters.

Description

The DELETE/IP command removes a VTXUPD IP account from the account file. Once an IP account is removed from the account file, all accounting information for the account is lost.

To delete a Workbench IP account from the account file, use the DELETE/IP=WORKBENCH command explained later in this chapter.

Example

The following example removes an IP account named WHIRLWIND.

```
ACU> DELETE/IP WHIRLWIND
Account successfully deleted
ACU>
```

MODIFY/IP

Changes selected information in a VTXUPD information provider account.

Format

MODIFY/IP *[node::]username [qualifier [...]]*

Parameters

node
A one- to six-character DECnet specification, or an asterisk (*) as a wildcard character, indicating the network node for the information provider account you want to modify. If you do not specify a node, the default node is the translation of the logical name SYS$NODE (local node).

username
A 1- to 30-character alphanumeric username or an asterisk as a wildcard character. The combined node and username string must not exceed 32 characters.

Qualifiers

/[NO]PASSWORD [=password]
Specifies a password for an existing account. If you specify a password for an IP account, the IP must enter that password when using the CONNECT command at the UPD> prompt or when selecting the CONNECT command in VTXUPD menu mode. The password consists of 1 to 32 ASCII characters. Allowable characters include the letters A to Z, the numerals 0 to 9, the dollar sign($), and the underscore (_).

/[NO]READ [=(page-range [,...])]
Allows the information provider to read pages in the infobase. If you do not specify a page range, full read access is granted to the IP for the entire infobase. If you include /NOREAD with MODIFY/IP, the information provider does not have read access to any page in the infobase.

In the VTXACU Utility, a page range is defined either as an individual page number or as a collection of continuous page numbers. When a page range has more than one page, the lower page number must be listed first, followed by a hyphen, followed by the higher page number. Separate page ranges by commas, and enclose the string of ranges in parentheses. If you specify only one page range, you can omit the parentheses. VTXACU allocates up to 100 page ranges for an information provider. You can distribute these ranges in any manner between the READ and WRITE modes of IP access with the /READ and /WRITE qualifiers.

/[NO]WRITE [=(page-range [,...])]
Allows the information provider to add, delete, and modify pages within the specified page range. If you do not specify a page range, full write access is granted to the IP. If you specify /NOWRITE, the IP does not have write access to any page in the infobase. For an explanation of page ranges and how to use them in the VTXACU Utility, see the /[NO]READ qualifier.

Description

The MODIFY/IP command changes selected information in a VTXUPD information provider account.

To change information in a Workbench information provider account, use the MODIFY/IP=WORKBENCH command explained later in this chapter.

Examples

The following example gives the information provider read access to pages 475, 500, and 525. Note that the VTXACU Utility considers each of these pages to be a separate page range and that the string of page ranges is enclosed in parentheses.

```
ACU> MODIFY/IP BUCKEYE/READ=(475, 500, 525)
Account successfully modified
ACU>
```

The following example gives the information provider read access to all pages in the range 34–55. This includes page 55. Note that because there is only one page range, the parentheses are omitted.

```
ACU> MODIFY/IP WOODLAND/READ=34-55
Account successfully modified
ACU>
```

The following example gives the information provider write access to all pages in the range 680–688*, including write access to any page that starts with the number 688.

```
ACU> MODIFY/IP EUCLID/WRITE=680-688*
Account successfully modified
ACU>
```

The following example removes previously granted read access to pages 475, 500, and 525.

```
ACU> MODIFY/IP BUCKEYE/NOREAD=(475, 500, 525)
Account successfully modified
ACU>
```

The following example removes previously granted read access to all pages in the range 34–55, including page 55.

```
ACU> MODIFY/IP WOODLAND/NOREAD=34-55
Account successfully modified
ACU>
```

The following example removes previously granted write access to all pages in the range 680–688*, including write access to all pages beginning with the number 688.

```
ACU> MODIFY/IP EUCLID/NOWRITE=680-688*
Account successfully modified
ACU>
```

The following example gives the information provider write access to page 2301, page 39014, all the pages in the range 4000–6004 (including page 6004), and all the pages in the range 667788–701122*, including any page that starts with the number 701122.

```
ACU> MODIFY/IP ERIE/WRITE=(2301, 39014, 4000-6004, 667788-701122*)
Account successfully modified
ACU>
```

The following example gives the information provider read access to all pages that start with the number 67 and to page 941. It removes write access to the pages falling within the range 5621–5622, including page 5622. Note that the parentheses could have been omitted after the /NOWRITE qualifier because only one page range is specified.

```
ACU> MODIFY/IP ONTARIO/READ=(67-67*, 941)/NOWRITE=(5621-5622)
Account successfully modified
ACU>
```

The following two-step example shows how a previously specified page range can be modified. In this example, read access to all pages in the range 4400–4423 (including page 4423) is removed, while read access is granted to all pages in the range 4410–4423*, including any page starting with the number 4423.

```
ACU> MODIFY/IP MAYFIELD/NOREAD=4400-4423
Account successfully modified
ACU> MODIFY/IP MAYFIELD/READ=4410-4423*
Account successfully modified
ACU>
```

In the following example, the information provider is given full read and write access to the infobase.

```
ACU> MODIFY/IP LORAIN/READ/WRITE
Account successfully modified
ACU>
```

In the same manner, you remove access to the infobase by using the /NOREAD and /NOWRITE qualifiers without page ranges.

The following example removes all read access.

```
ACU> MODIFY/IP STARK/NOREAD
Account successfully modified
ACU>
```

The following example removes all write access.

```
ACU> MODIFY/IP JEFFERSON/NOWRITE
Account successfully modified
ACU>
```

RESET/IP

Writes a VTXUPD IP's cumulative account statistics to a log file.

Format

RESET/IP *{[node::]username | /ALL} [qualifier[...]]*

Parameters

node
A one- to six-character DECnet specification, or an asterisk (*) as a wildcard character, indicating the network node for the information provider account you want to reset. If you do not specify a node, the default node is the translation of the logical name SYS$NODE (local node).

username
A 1- to 30-character alphanumeric username or an asterisk as a wildcard character. The combined node name and username cannot exceed 32 characters. If you specify a username, you cannot use the /ALL qualifier.

Qualifiers

/ALL
Resets statistics for all IP accounts. If you use the /ALL qualifier, you cannot specify a username.

/[NO]LOG
Specifies whether or not previous account values will be logged in the file VTXACF.VTL located in the current directory. The default is /LOG. Use the /NOLOG qualifier to disable logging of previous account values. You cannot use /OUTPUT with /NOLOG.

/OUTPUT=filename
Specifies the name of the file where the previous account statistics are to be logged. The /OUTPUT qualifier cannot be used with the /NOLOG qualifier. Use the /OUTPUT qualifier only if you want to log account values in a file other than the default file VTXACF.VTL.

Description

The RESET/IP command writes a VTXUPD IP's cumulative account statistics to a log file. This command resets cumulative information provider account statistics to zero.

By default, the RESET/IP command causes previous values for the account to be logged in the file VTXACF.VTL. VTXACF.VTL is a sequential access file consisting of zero or more variable length records. Each record consists of a VTX account name, a record type, and several pieces of VTX account usage information. For each information provider account record, the usage information indicates:

- Number of VTX logins
- Date of last VTX login
- Date when the account was last reset
- Total connect time
- Number of inserted pages
- Number of extracted pages
- Number of deleted pages

For every RESET/IP command you issue, one or more usage records are created in the log file. For instance, if you issue the RESET/IP/ALL command twice in a row for an account file containing 25 information providers, 50 new usage records will exist in the VTXACF.VTL log file (two records for each account).

Appendix B describes the characteristics of each of the 18 possible fields in a VTXACF.VTL account usage record.

To write a Workbench information provider's cumulative account statistics to a log file, use the RESET/IP=WORKBENCH command explained later in this chapter.

Example

The following example resets usage statistics for all VTX information provider accounts in the VTX account file. The command also specifies that the old statistics are to be logged in the file JUNE16.VTL.

```
ACU> RESET/IP/ALL/OUTPUT=JUNE16.VTL
Account usage statistics successfully reset
ACU>
```

SHOW/IP

Displays information about one or more VTXUPD IP accounts.

Format

SHOW/IP *{[node::]username | /ALL} [qualifier]*

Parameters

node
A one- to six-character DECnet specification, or an asterisk (*) as a wildcard character, indicating the network node for the information provider account on which you want to display information. If you do not specify a node, the default node is the translation of the logical name SYS$NODE (local node).

username
A 1- to 30-character alphanumeric username or an asterisk as a wildcard character. The combined node and username string must not exceed 32 characters.

Qualifiers

/ALL
Displays account information for all information provider accounts.

/OUTPUT=filename
Specifies that you want the information written to the designated file rather than displayed on your terminal.

Description

The SHOW/IP command displays information about one or more VTXUPD IP accounts. If you do not specify a username, you must use the /ALL qualifier.

To display information about Workbench IP accounts, use the SHOW/IP=WORKBE command explained later in this chapter.

Example

The following example displays information about all VTX IP accounts.

```
ACU> SHOW/IP/ALL

Account:  KIEV::JONES
Type:     Information Provider
Read:     ##### Access to the following page ranges has been granted #####
          (10-20)
Write:    ##### Access to the following page ranges has been granted #####
          (20-30)
Last Login:  none                              Connect Time:    0 00:00:00.00
Last Reset:  10-JAN-1989 14:53:10.63           Sessions:        0
Pages                                          Keywords
  Inserted:  0                                   Inserted:      0
  Extracted: 0                                   Extracted:     0
  Deleted:   0                                   Deleted:       0

Account:  LONDON::WHIRLWIND
Type:     Information Provider
Read:     ##### Full access #####
Write:    ##### Full access #####
Last Login:  none                              Connect Time:    0 00:00:00.00
Last Reset:   2-MAR-1989 09:12:34.09           Sessions:        0
Pages                                          Keywords:
  Inserted:  0                                   Inserted:      0
  Extracted: 0                                   Extracted:     0
  Deleted:   0                                   Deleted:       0

ACU>
```

3.9 Workbench IP Account Commands

You use the Workbench IP account commands to manage accounts for information providers using the Workbench Utility. Management tasks include adding, deleting, and modifying accounts, as well as monitoring Workbench information providers' account usage.

Table 3–4 summarizes the Workbench IP account commands.

Table 3–4: VTXACU Utility—Workbench IP Account Commands

Command	Description
ADD/IP=WORKBENCH	Adds a Workbench IP account to the account file.
DELETE/IP=WORKBENCH	Removes a Workbench IP account from the account file.
MODIFY/IP=WORKBENCH	Changes the account file record for a Workbench IP account.
RESET/IP=WORKBENCH	Resets account file records for a Workbench IP account.
SHOW/IP=WORKBENCH	Displays usage information for a Workbench IP account.

ADD/IP=WORKBENCH

Adds an account for a Workbench IP.

Format

ADD/IP=WORKBENCH *[node::]username [qualifier [...]]*

Parameters

node
A one- to six-character DECnet specification indicating the network node on which the Workbench IP runs the Workbench Utility. If you do not specify a node, the default node is the translation of the logical name SYS$NODE (local node). The network node can also be a VAX cluster alias name or an asterisk (*) as a wildcard character. The cluster alias indicates that the Workbench IP (username) can run the Workbench Utility from any node on the specified VAX cluster. The asterisk indicates that the Workbench IP can run the Workbench Utility from any node.

username
A 1- to 30-character alphanumeric username. The combined node and username string must not exceed 32 characters. You can also enter an asterisk as a wildcard character in place of a username. The asterisk indicates that any Workbench IP can run the Workbench Utility from the specified node.

Qualifiers

/PASSWORD=password
Specifies a password for the new account. If you specify a password, the Workbench IP will be prompted to enter a password to access the Workbench Server. The password must consist of 1 to 32 ASCII characters. Allowable characters include the letters A to Z, the numerals 0 to 9, the dollar sign ($), and the underscore (_).

/DEFGROUP=n
Specifies the default Workbench group code that will be applied to pages created by this Workbench IP if the IP does not designate a group code. You can assign a group number in the range of 0 to 4095. A page with group code 0 can be read and modified by any Workbench IP. Pages that are assigned any other group code numbers can be read and modified only by Workbench IPs who belong to the corresponding group.

/DEFPREFIX=string
Specifies the default prefix string value that will be applied to any page created by this Workbench IP. The Workbench Utility assigns new pages a prefix as follows:

- If the newly created page is a main menu or detached page, the Workbench Utility assigns the default prefix if one is assigned to the Workbench IP. If not, the Workbench Utility assigns the system default prefix.
- If the newly created page is a choice from an existing menu, the Workbench Utility assigns it the prefix of the menu that points to it.

For information on the system default prefix, see the description of the /SYSTEM qualifier of the MODIFY/PREFIX command later in this chapter. The *VAX VTX Guide to Designing and Implementing an Infobase* contains more information about prefix values and the page numbering procedure for the Workbench Utility.

A prefix value can be from 1 to 12 numeric characters in length. If the prefix value is 12 characters long (the maximum length of a page number), the Workbench IP can generate only one page and its continuation pages from it.

/READ_GROUP=(n[,n,...])
Specifies the group codes of the Workbench pages that the Workbench IP is allowed to read. You can specify a series of codes separated by commas and enclosed in parentheses. Valid group codes range from 0 to 4095 inclusive. If you do not specify a read group for a Workbench IP, read group 0 is enabled by default. Group code 4095 means that the Workbench IP has read access to all pages in the infobase.

/MODIFY_GROUP=(n[,n,...])
Specifies the group codes of the Workbench pages that the Workbench IP is allowed to modify. You can specify a series of codes separated by commas and enclosed in parentheses. Valid group codes range from 0 to 4095 inclusive. If you do not specify a read group for a Workbench IP, modify group 0 is enabled by default. Group code 4095 means that the Workbench IP can modify any page in the infobase.

NOTE

Read group and modify group codes are conceptually similar to VTX subscriber closed user group numbers, but they do not affect VTX pages. Rather, they control access to Workbench pages by Workbench IPs. A Workbench page is a Workbench Utility representation of a VTX page.

/ALTPREFIX [=(n[,n,...])]
Specifies the prefix values that the Workbench IP can designate for newly created or modified pages. A prefix value can be from 1 to 12 numeric characters in length. When a Workbench IP designates a prefix for a page, the prefix value will be checked against the list of valid prefix values in the Workbench IP's account file entry. You can enter from 1 to 70 prefix values. Separate the elements of a list with commas and enclose them in parentheses.

NOTE

For a prefix value to be valid, you must add it to the Workbench prefix file with the ADD/PREFIX command.

Description

The ADD/IP=WORKBENCH command adds an account for a Workbench IP. An IP who uses the Workbench Utility to update and maintain an infobase needs a Workbench IP account.

Examples

The following example adds a Workbench IP account named PLUM::TUCKER, allowing a default group code of 41 and read and modify access to Workbench pages with group codes of 3 and 5.

```
ACU> ADD/IP=WORKBENCH PLUM::TUCKER -
_ACU> /DEFGROUP=41/READ_GROUP=(3,5)/MODIFY_GROUP=(3,5)
Account successfully added
ACU>
```

The following example adds a Workbench IP account named JSB::ANNA, allowing full read and modify access, a default prefix of 28, and an alternate prefix of 8. The node name JSB is a cluster alias for a VAX cluster that includes four nodes. ANNA can log in to the Workbench Utility from any one of the four nodes.

```
ACU> ADD/IP=WORKBENCH JSB::ANNA/READ_GROUP=4095/MODIFY_GROUP=4095 -
_ACU> /DEFPREFIX=28/ALTPREFIX=8
Account successfully added
ACU>
```

DELETE/IP=WORKBENCH

Removes a Workbench IP account from the account file.

Format

DELETE/IP=WORKBENCH *[node::]username*

Parameters

node
A one- to six-character DECnet specification, or an asterisk (*) as a wildcard character, indicating the network node for the Workbench IP account you want to delete. If you do not specify a node, the default node is the translation of the logical name SYS$NODE (local node).

username
A 1- to 30-character alphanumeric username or an asterisk as a wildcard character. The combined node and username string must not exceed 32 characters.

Description

The DELETE/IP=WORKBENCH command removes a Workbench IP account from the account file. Once a Workbench IP account is removed from the account file, all accounting information for the account is lost.

Example

The following example deletes the PLUM::TUCKER account.

```
ACU> DELETE/IP=WORKBENCH PLUM::TUCKER
Account successfully deleted
ACU>
```

MODIFY/IP=WORKBENCH

Changes selected information in a Workbench IP account.

Format

MODIFY/IP=WORKBENCH *[node::]username [qualifier ...]*

Parameters

node
A one- to six-character DECnet specification, or an asterisk (*) as a wildcard character, indicating the network node for the Workbench IP account you want to modify. If you do not specify a node, the default node is the translation of the logical name SYS$NODE (local node).

username
A 1- to 30-character alphanumeric username or an asterisk as a wildcard character. The combined node and username string must not exceed 32 characters.

Qualifiers

/[NO]PASSWORD [=password]
Specifies a password for the new account. If you specify a password, the Workbench IP will be prompted to enter a password to access the Workbench Server. The password must consist of 1 to 32 ASCII characters. Allowable characters include the letters A to Z, the numerals 0 to 9, the dollar sign ($), and the underscore (_).

/[NO]DEFGROUP [=(n[,n,...])]
Specifies the default group code that will be applied to pages created by this Workbench IP if the IP does not explicitly designate a group code. The /NODEFGROUP qualifier removes the default group code assigned to a Workbench IP account.

/DEFPREFIX=string
Specifies the default prefix string value that will be applied to any page created by this Workbench IP. The Workbench Utility assigns new pages a prefix as follows:

- If the newly created page is a main menu or detached page, the Workbench Utility assigns the default prefix if one is assigned to the Workbench IP. If not, the Workbench Utility assigns the system default prefix.
- If the newly created page is a choice from an existing menu, the Workbench Utility assigns it the prefix of the menu that points to it.

For more information on the system default prefix, see the description of the /SYSTEM qualifier of the MODIFY/PREFIX command later in this chapter. The *VAX VTX Guide to Designing and Implementing an Infobase* contains more information about prefix values and the page numbering procedure for the Workbench Utility.

A prefix value can be from 1 to 12 numeric characters in length. If the prefix value is 12 characters long (the maximum length of a page number), the Workbench IP can generate only one page and its continuation pages from it.

/[NO]READ_GROUP [=(n[,n,...])]
Specifies the group codes of the infobase pages that this Workbench IP is allowed to read. You can specify a series of codes separated by commas. Valid group codes range from 0 to 4095 inclusive. If you do not specify a read group for a Workbench IP, read group 0 is enabled by default. Group code 4095 means that the Workbench IP has read access to all pages in the infobase.

If you use the /NOREAD_GROUP qualifier and do not specify any group codes, all read group values assigned to a Workbench IP account are removed. To remove individual group values, use the format /NOREAD_GROUP=(n,...).

You cannot remove and add read group codes on the same command line.

/[NO]MODIFY_GROUP [=(n[,n,...])]
Specifies the group codes of the infobase pages that the Workbench IP is allowed to modify. You can specify a series of codes separated by commas. Valid group codes range from 0 to 4095 inclusive. If you do not specify a

modify group for a Workbench IP, modify group 0 is enabled by default. Group code 4095 means that the Workbench IP can modify any page in the infobase.

If you use the /NOMODIFY_GROUP qualifier and do not specify any group codes, all modify group values assigned to a Workbench IP account are removed. To remove individual group values, use the format /NOMODIFY_GROUP=(n,...).

You cannot remove and add modify group codes on the same command line.

/[NO]ALTPREFIX [=(n[,n,...])]
Specifies the prefix values that the Workbench IP can designate for newly created or modified pages. A prefix value can be from 1 to 12 numeric characters in length. When a Workbench IP designates a prefix for a page, the prefix value will be checked against the list of valid prefix values in the Workbench IP's account file entry. You can enter from 1 to 70 prefix values. Separate the elements of a list with commas and enclose them in parentheses. If you specify a 12-character prefix value, the Workbench IP can create only continuation pages with it.

If you use the /NOALTPREFIX qualifier and do not specify any group codes, all alternate prefix values assigned to a Workbench IP account are removed. To remove individual prefix values, use the format /NOALTPREFIX=(n,...).

You cannot remove and add prefixes on the same command line.

Description

The MODIFY/IP=WORKBENCH command changes selected information in a Workbench IP account.

Examples

The following example removes all alternate prefix values associated with the PEACHY::KEENE account.

```
ACU> MODIFY/IP=WORKBENCH PEACHY::KEENE /NOALTPREFIX
Account successfully modified
ACU>
```

The following example removes the alternate prefix values 123 and 234 from the *::HARRIS Workbench IP account.

```
ACU> MODIFY/IP=WORKBENCH *::HARRIS /NOALTPREFIX=(123,234)
Account successfully modified
ACU>
```

The following example adds read groups 4 and 1 to the BAMMA::BOOZLE account.

```
ACU> MODIFY/IP=WORKBENCH BAMMA::BOOZLE /READ_GROUP=(4,1)
Account successfully modified
ACU>
```

The following example specifies a password for the CLIFF::HANGER account.

```
ACU> MODIFY/IP=WORKBENCH CLIFF::HANGER /PASSWORD=EASY2TYPE
Account successfully modified
ACU>
```

RESET/IP=WORKBENCH

Writes a Workbench IP's cumulative account statistics to a log file.

Format

RESET/IP=WORKBENCH *{[node::]username|/ALL} [qualifier[...]]*

Parameters

node
A one- to six-character DECnet specification, or an asterisk (*) as a wildcard character, indicating the network node for the Workbench IP account you want to reset. If you do not specify a node, the default node is the translation of the logical name SYS$NODE (local node).

username
A 1- to 30-character alphanumeric username or an asterisk as a wildcard character. The combined node name and username cannot exceed 32 characters. If you specify a username, you cannot use the /ALL qualifier.

Qualifiers

/ALL
Resets statistics for all Workbench IP accounts. If you use the /ALL qualifier, you cannot specify a username.

/[NO]LOG
Specifies whether or not previous account values will be logged in the file VTXACF.VTL located in the current directory. The default is /LOG. Use the /NOLOG qualifier to disable logging of previous account values. You cannot use /OUTPUT with /NOLOG.

/OUTPUT=filename
Specifies the name of a file where the previous account statistics are to be logged. The /OUTPUT qualifier cannot be used with the /NOLOG qualifier. Use the /OUTPUT qualifier only if you want to log account values in a file other than the default file VTXACF.VTL.

Description

The RESET/IP=WORKBENCH command writes a Workbench IP's cumulative account statistics to a log file. This command resets cumulative Workbench IP account statistics to zero.

By default, the RESET/IP=WORKBENCH command causes previous values for the account to be logged in the file VTXACF.VTL. VTXACF.VTL is a sequential access file consisting of zero or more variable length records. Each record consists of a VTX account name, a record type, and several pieces of VTX account usage information. For each Workbench IP account record, the usage information indicates:

- Number of Workbench Utility logins
- Date of last Workbench Utility login
- Date when the account was last reset
- Total connect time
- Number of pages currently reserved
- Number of pages loaded into the Workbench library
- Number of pages updated
- Date of last infobase update

For every RESET/IP=WORKBENCH command you issue, one or more usage records are created in the log file. For example, if you issue the RESET/IP=WORKBENCH/ALL command twice in a row on an account file containing 25 Workbench IP accounts, 50 new usage records will exist in the VTXACF.VTL log file (two records for each account).

Appendix B describes the characteristics of each of the 18 possible fields in a VTXACF.VTL account usage record.

Example

The following example resets cumulative statistics for the Workbench IP account named SMITH.

```
ACU> RESET/IP=WORKBENCH SMITH
Account usage statistics successfully reset
ACU>
```

SHOW/IP=WORKBENCH

Displays information about one or more Workbench IP accounts.

Format

SHOW/IP=WORKBENCH *{[node::]username | /ALL} [qualifier]*

Parameters

node
A one- to six-character DECnet specification, or an asterisk (*) as a wildcard character, indicating the network node for the Workbench IP account on which you want to display information. If you do not specify a node, the default node is the translation of the logical name SYS$NODE (local node).

username
A 1- to 30-character alphanumeric username or an asterisk as a wildcard character. The combined node and username string must not exceed 32 characters.

Qualifiers

/ALL
Displays account information for all Workbench IP accounts.

/OUTPUT=filename
Specifies that you want the information written to the designated file rather than displayed on your terminal.

Description

The SHOW/IP=WORKBENCH command displays information about one or more Workbench IP accounts. If you do not specify a username, you must use the /ALL qualifier.

Example

The following example displays information about the PLUM::TUCKER Workbench IP account.

```
ACU> SHOW/IP=WORKBENCH PLUM::TUCKER

Account:  PLUM::TUCKER
Type:     Workbench Information Provider
Default Group:      41
Default Prefix:  none
Read Groups:         0    3    5    41
Modify Groups:       0    3    5    41
Prefixes:  none

Last Login:  none                              Connect Time:    0 00:00:00.00
Last Reset:  10-FEB-1989 14:05:55.55           Sessions:        0
Pages Reserved:      0  Pages Loaded:       0  Pages Updated:       0
Last Update:  10-FEB-1989 14:06:10.44

ACU>
```

3.10 VTXACU Workbench Prefix File Commands

You use the Workbench prefix file commands to create and maintain the prefix values in the Workbench prefix files. The Workbench server uses these values to generate page numbers for pages created by Workbench information providers. For each prefix in the prefix file, the Workbench server maintains a count of the page numbers that have been generated from the prefix. The Workbench server creates a unique page number by appending the current value of a prefix's count to the prefix. For example, suppose prefix 1234 has had 5 pages created from it (123400000001 through 123400000005), making its counter value 5. The sixth page created from prefix 1234 will be page 123400000006.

For more information on Workbench prefix files, see the *VAX VTX Guide to Designing and Implementing an Infobase*.

Table 3–5 summarizes the Workbench prefix file commands.

Table 3–5: VTXACU Utility—Workbench Prefix File Commands

Command	Description
ADD/PREFIX	Adds one or more prefix values to the Workbench prefix file.
CLOSE/PREFIX	Closes the Workbench prefix file to VTXACU Utility use. The prefix file remains available to the Workbench server.
DELETE/PREFIX	Removes one or more prefix values from the Workbench prefix file.
MODIFY/PREFIX	Changes the characteristics of a Workbench prefix value. Also, can designate a system default Workbench prefix value.
OPEN/PREFIX	Makes the Workbench prefix file available to the VTXACU Utility.
SHOW/PREFIX	Displays information about one or more prefix values in the Workbench prefix file.

ADD/PREFIX

Adds a prefix value to the Workbench prefix file, making the value either valid for Workbench IPs or restricted from use by Workbench IPs.

Format

ADD/PREFIX *prefix-value [/RESERVE]*

Parameter

prefix-value
A page prefix value of up to 12 characters. Any combination of the numerals 0–9 is a valid page prefix value. The shorter the prefix value, the more primary page values can be generated from it. If the prefix value is 12 characters long (the maximum length of a primary page number), only one primary page and its continuation pages can be generated from the prefix. If the prefix value is 10 characters long, 99 primary pages and their continuation pages can be generated from the prefix. If you issue no ADD/PREFIX commands, and a Workbench IP specifies no prefix for a page, the system default prefix (99) is used to generate the page number.

It is recommended that you use three- to five-character prefixes. For more information on using prefixes with the Workbench Utility, see the *VAX VTX Guide to Designing and Implementing an Infobase*.

The prefix 089 is automatically reserved by VTX when the Workbench files are created.

Qualifier

/RESERVE
Specifies that a prefix is not available to Workbench IPs. The /RESERVE qualifier restricts Workbench IPs from generating pages with a prefix that is or might be used by non-Workbench components like VTXUPD, APMS, and VAX VTX/VALU RUSL applications. To make a reserved prefix available to the Workbench Utility, use the /NORESERVE qualifier of the MODIFY/PREFIX command.

Workbench Prefix File Commands
ADD/PREFIX

Description

The ADD/PREFIX command adds a prefix value to the Workbench prefix file, making the value either valid for Workbench IPs or restricted from use by Workbench IPs. To enable a Workbench IP to use a specific prefix value, you must specify that value in the Workbench IP's account with the ADD/IP=WORKBENCH or MODIFY/IP=WORKBENCH commands.

Example

The following example opens the Workbench prefix file, adds prefixes 4405 and 8301 to the file, and marks prefix 8301 as reserved for use by non-Workbench components.

```
ACU> OPEN/PREFIX
ACU> ADD/PREFIX 4405
ACU> ADD/PREFIX 8301/RESERVE
ACU> EXIT
```

CLOSE/PREFIX

Closes the prefix file that was opened by the previous OPEN/PREFIX command.

Format

CLOSE/PREFIX

Description

The CLOSE/PREFIX command closes the prefix file that was opened by the previous OPEN/PREFIX command. When you close the prefix file from the VTXACU Utility, the Workbench server can still use the file.

Example

The following example opens a Workbench prefix file in the directory named [WB.FILES] and then closes the prefix file with a CLOSE/PREFIX command.

```
ACU> OPEN/PREFIX [WB.FILES]
ACU> CLOSE/PREFIX
ACU>
```

DELETE/PREFIX

Lets you remove a prefix value from the Workbench prefix file, making the prefix value unavailable for Workbench IPs.

Format

DELETE/PREFIX *prefix-value*

Parameter

prefix-value
The page prefix value you want to delete from the list of valid prefix values.

Description

The DELETE/PREFIX command lets you remove a prefix value from the Workbench prefix file, making the prefix value unavailable for Workbench IPs. Deletion of a prefix value might cause the eventual loss of existing pages that had been created with the deleted prefix. This situation can occur when future prefixes are added to the prefix file. The new prefixes might eventually be used to generate page numbers that duplicate some of the page numbers generated by the original prefixes. The new pages will overwrite any existing pages with duplicate page numbers. To prevent this from occurring, you can reserve a prefix value rather than delete it. To reserve a prefix value, use the /RESERVE qualifier on the MODIFY/PREFIX command.

Example

The following example deletes the prefix 44 from the list of valid prefix values.

```
ACU> DELETE/PREFIX 44
ACU>
```

MODIFY/PREFIX

Allows you to change the restriction on a prefix in the prefix file.

Format

MODIFY/PREFIX *prefix-value [qualifier[...]]*

Parameter

prefix-value
The page prefix value to be modified.

Qualifiers

/[NO]RESERVE
Specifies that a prefix is either available (/NORESERVE) or unavailable (/RESERVE) to Workbench IPs. The /RESERVE qualifier restricts Workbench IPs from generating pages with prefixes that are or might be used by non-Workbench components like VTXUPD, APMS, and VAX VTX/VALU RUSL applications. The /NORESERVE qualifier removes that restriction. You cannot use the /RESERVE and /NORESERVE qualifiers with the /SYSTEM qualifier.

/SYSTEM
Specifies a system-wide default prefix for the Workbench Utility. The system default prefix is initially 99. If you foresee non-Workbench components on your VTX system generating pages with a prefix of 99, you should modify the Workbench default prefix.

You cannot use the /SYSTEM qualifier with the /RESERVE or /NORESERVE qualifier.

Workbench Prefix File Commands
MODIFY/PREFIX

Description

The MODIFY/PREFIX command allows you to change the restriction on a prefix in the prefix file. It also allows you to change the Workbench default prefix.

Examples

The following example removes the restriction on prefix 345 and makes it available to Workbench IPs.

```
ACU> MODIFY/PREFIX/NORESERVE 345
%VTX-I-ACU_PGSRES, 0 Pages have been created with this prefix
ACU>
```

The following example establishes 88 as the Workbench default prefix.

```
ACU> MODIFY/PREFIX/SYSTEM 88
ACU>
```

OPEN/PREFIX

Opens the prefix file of the Workbench library so that you can display, add to, delete, and modify its contents.

Format

OPEN/PREFIX *[directory-spec]*

Parameter

directory-spec
The directory specification of the VMS directory that contains the Workbench library. If you do not specify a directory, the default is your SYS$LOGIN directory. Workbench library files, one of which is the prefix file, are created when you issue the OPEN/LIBRARY command from the WBSRV> prompt of the VTXCTL Utility.

Description

The OPEN/PREFIX command opens the prefix file of the Workbench library so that you can display, add to, delete, and modify its contents. The Workbench server uses the prefix values in the prefix file to create page numbers for a Workbench IP.

The SHOW/PREFIX command displays the current count of any prefix in the Workbench prefix file.

Example

The following example opens the prefix file in the directory named [.WORKLIB].

```
ACU> OPEN/PREFIX [.WORKLIB]
ACU>
```

SHOW/PREFIX

Displays information about one or more prefixes in the Workbench prefix file.

Format

SHOW/PREFIX *[prefix-value] [qualifier[...]]*

Parameter

prefix-value
The prefix value for which you want to display information. If you use the /ALL or /SYSTEM qualifiers, do not specify *prefix-value*.

Qualifiers

/ALL
Specifies that you want information about all prefixes in the Workbench prefix file.

/OUTPUT=filename
Specifies that you want the information written to the designated file rather than displayed on your terminal.

/SYSTEM
Specifies that you want information about only the default system prefix.

Description

The SHOW/PREFIX command displays the following information about one or more prefixes in the Workbench prefix file:

- Prefix
- Current counter value for the default prefix (prefix used for all pages except form pages)
- Maximum value that the default counter can reach

- Current counter value for the form page prefix
- Maximum value that the form page counter can reach
- Current value of prefix qualifiers, indicating a prefix is reserved and not available for Workbench generated pages or indicating a prefix is the system prefix for the Workbench Utility

Example

The following example uses an initial SHOW/PREFIX command to show what is displayed before any prefixes are added to the prefix file. The only prefixes displayed are the default system prefix (99) and the VTX-reserved prefix 089.

Following the first SHOW/PREFIX command, the example adds prefix 123 to the prefix file and then issues a second SHOW/PREFIX command.

```
ACU> OPEN/PREFIX
ACU> SHOW/PREFIX/ALL
Prefix  Cntr (default)     Maximum    Cntr (forms)  Maximum    Flags
089                 0   999999999              0    99999  Reserved
99                 45  4294967295              0  9999999  System
ACU> ADD/PREFIX 123
ACU> SHOW/PREFIX/ALL
Prefix  Cntr (default)     Maximum    Cntr (forms)  Maximum    Flags
089                 0   999999999              0    99999  Reserved
123                 0  4294967295              0    99999
99                 45  4294967295              0  9999999  System
ACU>
```

3.11 Maintaining a Base Page Determination File

VTX lets you predetermine the page, referred to as the *base page*, subscribers first access when entering the VTX service. The base page, usually a menu, is the first page a subscriber sees when running VTX. To designate specific base pages for VTX subscribers, you must modify the base page determination file and enter the information that will be used to designate a base page for every subscriber logging in to your VTX service.

You can use the base page determination file to make:

- Infobase contents secure
- Page retrieval efficient
- Page display consistent

When a subscriber tries to log in to VTX, the server determines that subscriber's base page on the basis of the first match in the base page determination file. As soon as it can match a subscriber with a line in the base page determination file, the server stops checking the file and displays the appropriate base page.

For example, a French-speaking subscriber should not have to navigate through the infobase to reach the French main menu. A base page determination file can make the French main menu the first page this subscriber sees.

Because of the nature of their jobs, some subscribers should have free access to the VTX infobase and should, for example, be able to bypass the normal security measures associated with retrieving remote, or even local, information.

You determine a subscriber's base page according to the following:

- Username

  A username:

  - Must include a node name, two colons, and the user's account name. For example, BOSTON::MILLER and LONDON::FINDLER are valid usernames for a base page determination file.
  - Can include wildcard characters in either the account name portion or the node name portion of the field. For example, LONDON::* specifies all users on node LONDON. The username *::SYSTEM specifies any SYSTEM account, no matter what node the account is located on.

- Can include a cluster alias node name. For example, if the node LONDON is on a VAX cluster that has a cluster alias name of EUROPE, EUROPE::FINDLER can be specified as a username. When the subscriber named FINDLER is logged into any node on the EUROPE cluster, including LONDON::FINDLER, the EUROPE::FINDLER entry specifies the base page entry.
- Can specify %GUEST%, without indicating a node name. A single asterisk (*) and %GUEST% have the same meaning when used as username specifiers in the base page determination file.

- Source server

  This is the server name assigned to a local server by the REMOTE command in the server mode of the VTXCTL Utility. Whether for expedience or security, subscribers who log in to VTX from remote nodes often should not, or need not, see certain pages of the infobase.

  For information about source servers, see the description of the REMOTE command in Chapter 2.

- Source page

  This field is used when a remote request comes in for a page in the local infobase. If the requested remote page number matches the source page number, the base page listed with the source page will be shown to the subscriber.

- Language preference

  If a subscriber has a language preference, the base page determination file is the way to get the subscriber directly to the base page for that language. The valid language types are English, French, German, Italian, Spanish, and Swedish.

- Protocol

  Because various terminal types have various display capabilities, a VTX infobase can conceivably be structured on the basis of page display characteristics. For example, one infobase file might consist of ReGIS pages, another of ASCII pages, and so on. You can use the protocol field in the base page determination file to reduce the possibility that subscribers will retrieve pages that their terminals cannot display. The protocols you can specify in the base page determination file are ANTIOPE, ASCII, CEPT, DECtalk, DDIF, NAPLPS, Prestel, ReGIS, and UIS.

You create a base page determination file in a six-column format, specifying the base page and the values that will determine base pages. By default, this file is named VTXBASE.TXT and resides in the same directory as the VTX server. The base page determination file can have other names by defining the logical name VTX$BPDF. When a subscriber logs in to VTX, the server reads this file to determine the subscriber's base page.

Whenever you make changes to your base page determination file, the changes take effect the next time you start the server or after you load the revised base page determination file by issuing the LOAD BASE command in server mode in the VTXCTL utility.

3.11.1 Creating the Source File

You create the source file for the base page determination file with an ASCII text editor. By default, the source file is named VTXBASE.TXT. A sample base page determination file (VTXBASE.TXT) can be found in the directory SYS$SYSROOT:[VTX$LIBRARY].

The source file contains six columns: username, source server, source page, language preference, protocol, and base page, in that order. The base page can be any number up to 14 digits, or 12 digits plus the decimal-style continuation page number. Entries in the base page determination file should be listed in sequence from the most specific entries to the least specific entry. VTX reads the file from top to bottom. The first match determines the subscriber's base page.

You can enter an asterisk (*) as a wildcard character in any base page determination field (except the BASE PAGE field) to indicate that the particular field has no effect on determining a subscriber's base page. For example, if an entry in the base page determination file contains an asterisk in the username column and ASCII in the protocol column, the entry applies to any subscriber who logs in to VTX from an ASCII terminal.

If you want to include comment text, such as column headings, in the base page determination file, you must start each line of comment text with an exclamation point in the first column of the line. The exclamation point indicates that the following line is for documentation purposes only and is to be ignored when the file is compiled.

Example 3–1 illustrates a section of a sample base page determination file.

Example 3–1: Sample Base Page Determination File 1

```
!                        BASE PAGE DETERMINATION FILE

!                          Source   Source   Language                  Base
!  Username                Server   Page     Preference    Protocol    Page
!------------------        ------   ------   ----------    --------    ------

*                          ADMIN    *        *             ASCII       51
*                          MFG      1234     FRENCH        *           51.004
KIEV::JONES                MFG      *        *             *           00487
*                          *        *        ENGLISH       *           0
*                          *        *        FRENCH        *           3
```

3.11.2 Base Page Determination Algorithm

When the VTX server receives a subscriber's request to run VTX, the server tries to find a line in the base page determination file that matches the subscriber's base page values:

- Username—The subscriber's VMS connect name
- Source server—The remote name of the subscriber's local server (this name is optionally assigned by the REMOTE/HERE command in the server mode of the VTXCTL Utility)
- Source page—The page number the subscriber was viewing when the subscriber requested a remote page
- Language preference—The language optionally specified by the subscriber on the VTX command line with the qualifier /LANGUAGE=n
- Protocol—The protocol optionally specified by the subscriber on the VTX command line with the qualifier /PROTOCOL=n

Assuming the server that uses the base page determination file in Example 3–1 resides on node LONDON, the interpretation of the information in Example 3–1 is as follows:

- Any subscriber trying to log in from source server ADMIN with an ASCII terminal would be directed by the server to page 51, regardless of the subscriber's language preference or source page.
- If a subscriber is directed to the server on node LONDON from source server MFG by means of remote page 1234, and if that subscriber is also profiled as having a French language preference, the subscriber will be directed to page 51.004.
- If subscriber KIEV::JONES tries to access the LONDON server through MFG, Jones will be directed to page 00487.

- Subscribers who try to access the LONDON server from any server other than ADMIN or MFG (local users, for example) will be directed to page 0 if they are English speaking, or page 3 if they are French speaking.

The sample base page determination file in Example 3–2 is a simplified version that determines base pages solely on the basis of username.

Example 3–2: Sample Base Page Determination File 2

```
!                    BASE PAGE DETERMINATION FILE

!                      Source  Source  Language                Base
!  Username            Server  Page    Preference   Protocol   Page
!------------------    ------  ------  ----------   --------   -----

PARIS::*               *       *       *            *          60
*::SYSTEM              *       *       *            *          61
%GUEST%                *       *       *            *          62
*                      *       *       *            *          77
```

The interpretation of the information in Example 3–2 is as follows:

- Any subscriber trying to log in from node PARIS, regardless of account name, will be directed to page 60.
- Any subscriber trying to log in from the SYSTEM account on any node other than PARIS will be directed to page 61.
- Any subscriber whose username is %GUEST% will be logged in under the %GUEST% account and directed to page 62.
- Any subscriber whose username does not contain PARIS, SYSTEM, or %GUEST% will be directed to page 77.

Chapter 4

Infobase Verification Utility

This chapter explains how to verify the integrity of VTX infobases and uses the reference format to describe the VTX Infobase Verification Utility (VTXIVU) Utility commands.

4.1 Verifying the Integrity of an Infobase

The VTXIVU Utility enables you to analyze the state of a VTX infobase and identify any inconsistencies. The utility produces a verification report summarizing problems that it finds. The report contains information about the infobase, its pages, and its keywords. The report can also include cross-reference sections about both pages and keywords. The VTXIVU Utility lets you verify infobase files on both local and remote nodes.

Using the VTXIVU Utility, you can:

- Locate pages in the infobase that are not referenced by other pages in the page files or by keywords in the keyword file
- Identify pages that are referenced by pages or keywords in the infobase but that do not really exist
- Locate pages that have expired
- Verify that continuation pages are consistent

  A succession of continuation pages should not be missing any continuation pages. Also, a page marked as having a continuation page must have at least one continuation page.
- Identify pages with keywords that do not allow direct access
- Identify pages out of the range specified
- Identify pages found in more than one page file
- Produce a cross-reference report of the pages in the infobase

- Identify keywords that exist in the page files, but that are not in the keyword file
- Produce a cross-reference report of the keywords in the infobase
- Verify that all pages referenced in the base page determination file exist in the infobase

4.2 Starting the VTXIVU Utility

The VTXIVU Utility must be run in a process that has access to the infobase files you are verifying.

To start the VTXIVU Utility, type the following command at the DCL prompt:

```
$ RUN SYS$SYSTEM:VTXIVU
```

The VTXIVU Utility displays the following:

```
VAX VTX Infobase Verification Utility V4.0
IVU>
```

At the IVU> prompt, you can issue any of the utility's three commands:

```
VERIFY
HELP
EXIT
```

EXIT

Lets you exit from the VTXIVU Utility.

Format

EXIT

Description

The EXIT command lets you finish your work in the VTXIVU Utility and returns you to DCL level.

Example

The following example completes the current session with the VTXIVU Utility and returns you to the DCL prompt.

```
IVU> EXIT
$
```

HELP

Lets you get help information for any VTXIVU command.

Format

HELP *[topic]*

Parameter

topic
One of a number of topics for which help is available. If you specify a topic, you will get a help display related to that topic. If you do not specify a topic, you will get a list of topics for which help is available.

Description

The HELP command lets you get help information for the VTXIVU Utility and the VTXIVU commands. The help available is similar to VMS help. You can ask for general help, or you can ask for help on specific topics and subtopics.

VERIFY

Produces an infobase verification report.

Format

VERIFY *[filename [/RANGE*
[=(page-number,thru-page-number)]],...]
[qualifier [...]]

Parameter

filename
The name of a page file. The default page file name is VTXPAGE.VTD. You can also verify page files on remote nodes by including the node name in the file specification. If you specify more than one file name, separate the file names with commas.

Qualifiers

/RANGE [=(page-number,thru-page-number)]
Specifies a range for the specified page file.

For each page file name you specify with the VERIFY command, you can use the /RANGE qualifier to specify a page range. The VTXIVU Utility flags those pages whose numbers are outside the specified range for that page file when doing the infobase verification. By default it uses the range specified in the page file header.

/[NO]BASE_PAGE_FILE [=filename]
Specifies whether or not the VTXIVU Utility should also verify the base page determination file. The default is /BASE_PAGE_FILE.

The file name specifies the name of the base page determination file. You can verify a base page determination file on a remote node by including the node name in the file specification. The default file name is VTXBASE.TXT, and the default logical name is VTX$BPDF. If you specify only a directory

name, the VTXIVU Utility looks in that directory for VTXBASE.TXT. You can specify only one base page determination file.

/[NO]CROSS_REFERENCE
Specifies whether or not the verification report is to include a cross-reference report. The cross-reference report contains a page cross-reference section and, if the /KEYWORD_FILE qualifier is specified, a keyword cross-reference section. The default is /NOCROSS_REFERENCE.

/[NO]KEYWORD_FILE [=(filename1,filename2 [,...])]
Specifies whether or not the VTXIVU Utility is also to verify one or more keyword files. The file name is the name of a keyword file. The range used is the range that is specified in the keyword file header. You can also verify keyword files on remote nodes by including the node name in the file specification. The default keyword file name is VTXKEYWRD.VTK. If you specify only a directory, the VTXIVU Utility looks in that directory for the default keyword file. The default is /NOKEYWORD_FILE.

If you want the infobase verification report to contain a keyword cross-reference section, include the /CROSS_REFERENCE qualifier with the /KEYWORD_FILE qualifier.

/[NO]FORM_HELP
Specifies whether or not the VTXIVU Utility should verify help pages associated with fields on form pages. The default is /NOFORM_HELP. If the help page exists and the qualifier is specified, the page will be verified. If the help page exists and the qualifier is not specified, the help page will be listed as unreferenced. If the help page does not exist and the /FORM_HELP qualifier is specified, the page will be referenced as not existing.

VTX requires a specific page numbering pattern for field help pages. For details, see the description of the /HELP qualifier in the ADD/PAGE command in Part III of the *VAX VTX Infobase Provider's Guide*.

/OUTPUT [=filename]
Specifies the file name of the verification report. If you do not use /OUTPUT, the report is displayed on your terminal.

If you do not specify a file name, the default file name supplied by the VTXIVU Utility is the same as the name of the first page file. The default file type is VTV.

Description

The VERIFY command lets you produce a report summarizing any problems and inconsistencies in a subset of the infobase that can consist of the following files:

- One or more page (VTD) files
- One or more keyword (VTK) files
- A base page determination file (VTXBASE.TXT, logical name VTX$BPDF)

The infobase verification report can also contain a cross-reference report, which details the structure of the infobase. A cross-reference report can include two sections: a page cross-reference section, created when you specify the /CROSS_REFERENCE qualifier, and a keyword cross-reference section, created when you specify the /KEYWORD_FILE qualifier with the /CROSS_REFERENCE qualifier.

The page cross-reference section of the report lists the following information for each page in the infobase subset:

- The page number
- Flags highlighting any problems with the page
- The page type (menu, list menu, display, form, template, or remote)
- The page file (VTD) where the page is located
- Any pages in the page files or keywords in the keyword files that reference the page
- Page number of any corresponding template page
- Page numbers of any corresponding help page
- Any keywords defined by the page

The keyword cross-reference section lists the following information for each keyword in the infobase subset:

- The keyword
- Flags highlighting any problems with the keyword
- Page numbers associated with the keyword
- Keyword file name
- Any title associated with the page number
- Any pages in the page files that reference the keyword

The verification report uses 132 columns. If you intend to display the report on your terminal, set the terminal display width to 132 columns. After you issue the VERIFY command, you are returned to DCL level.

See Appendix A for a sample VTXIVU report. The format of your reports will look similar, but the contents will differ because of differences in your infobase subset.

Examples

The first example verifies the page file VTXMAIN.VTD in the default directory. The verification includes a report on VTXBASE.TXT, also located in the default directory. The verification does not include a keyword file. The verification report is the file VTXMAIN.VTV and does not contain a cross-reference report.

```
IVU> VERIFY VTXMAIN/OUTPUT
```

The second example verifies the page file VTXMAIN.VTD and the keyword file MAINKEYA.VTK. Both files are located in the default directory. (Note that the page range 20 through 30 includes pages 2001, 2002, 21, 275, and so on.) The verification includes a report on VTXBASE.TXT, also located in the default directory. The verification report is the file VTXMAIN.VTV and contains a page and keyword cross-reference report.

```
IVU> VERIFY VTXMAIN/RANGE=(20,30) /OUTPUT/CROSS/KEYWORD_FILE=MAINKEYA
```

The third example verifies three page files (BOOKS.VTD, FICTION.VTD, and NONFICT.VTD), all located in the default directory. The verification report includes the keyword file BOOKSKEYS.VTK, also located in the default directory, and VTXBASE.TXT located on DISK1:[VTX]. The verification report is the file 24JUN89.VTV and does not contain a cross-reference report.

```
IVU> VERIFY BOOKS, FICTION, NONFICT /BASE=DISK1:[VTX] -
_IVU> /KEYWORD_FILE=BOOKSKEYS /OUTPUT=24JUN89
```

The fourth example verifies one page file with four associated, context-sensitive keyword files. The report is written to the output file AUTOS.LIS.

```
IVU> VERIFY AUTOS.VTD -
_IVU>/KEYWORD_FILE=(FULL_SIZE.VTK,MID_SIZE.VTK,COMPACT.VTK,OTHERS.VTK)
_IVU> /OUTPUT=AUTOS.LIS
```

The fifth example verifies a remote infobase located on DISK1 in the directory VTX on node BOSTON. The infobase subset includes the page file NEWS.VTD, the keyword file NEWS.VTK, and the default base page determination file on the remote node. The verification report is named NEWS.VTV and is created in the default directory on the local node. The report does not include a cross-reference section.

```
IVU> VERIFY BOSTON::DISK1:[VTX]NEWS.VTD -
_IVU> /BASE_PAGE_FILE=BOSTON::DISK1:[VTX] -
_IVU> /KEYWORD_FILE=BOSTON::DISK1:[VTX]NEWS.VTK -
_IVU> /OUTPUT
```

Appendix A

Infobase Verification Report

This appendix contains Example A–1, a sample Infobase Verification Report created by the VTXIVU Utility.

Example A–1: Infobase Verification Report

```
IVU.TXT 23-MAR-1989 09:32:14.87  VAX VTX Infobase Verification Utility V4.0  Page 1

                          +-------------------+
                          | Infobase Synopsis |
                          +-------------------+

                                                Num. Pages      Num. Pages       Total
Page File        Low Page    High Page          in Range       out of Range      Pages
---------        --------    ---------          ----------     ----------      ------
INVEST.VTD       0           9~~~~~~~~~~~~~~            6              0           6
                                                ----------     ----------      ------
                                      Totals            6              0           6

                                                Num. Keywords   Num. Keywords    Total
Keyword File       Low Page    High Page          in Range       out of Range    Keywords
------------       --------    ---------          ----------     ----------      --------
INVEST_0.VTK       0           0~                        2              0             2
INVEST_1.VTK       1           1~                        3              0             3
INVEST_2.VTK       2           2~                        3              0             3
INVEST_3.VTK       3           3~                        2              0             2
                                                ----------     ----------      --------
                                    Totals               10              0            10

Base Page File:  VTXBASE.TXT
```

(continued on next page)

Example A–1 (Cont.): Infobase Verification Report

```
IVU.TXT 23-MAR-1989 09:32:14.98  VAX VTX Infobase Verification Utility V4.0  Page 2

                              +---------------+
                              | Page Synopsis |
                              +---------------+

There are no unreferenced pages.

There are 3 nonexistent pages referenced:
      001
      002
      003
Nonexistent pages are flagged by an "N" in the cross reference below.

There are no expired pages.

There are no multiply defined pages.

There are no invalid continuation pages.

There are no invalid keyword access pages.

There are no pages out of range.

There are no invalid successor marked pages.

There are no referenced form pages.

There are no invalid page control records.
```

(continued on next page)

Example A–1 (Cont.): Infobase Verification Report

```
IVU.TXT 23-MAR-1989 09:32:15.02  VAX VTX Infobase Verification Utility V4.0  Page 3

                          +----------------------+
                          | Page Cross Reference |
                          +----------------------+

Page                                                                  Help
Number  Flags  Type  Page File   Referenced By ...  Templ. Pages  Pages  Keywords
------  -----  ----  ---------   -----------------  ------------  -----  --------
0              MENU  INVEST.VTD  Base Page File     02            01     MAIN_MENU
                                 MAIN_MENU
001      N                       01
002      N                       01
003      N                       01
01             LIST  INVEST.VTD  0                                       HELP
                                 1
                                 2
                                 3
                                 HELP
02             TEMP  INVEST.VTD  0
                                 1
                                 2
                                 3
1              DISP  INVEST.VTD  0                 02            01     NY
                                 BOUGHT_JAN_86                        STOCK
                                 NY                                   BOUGHT_JAN_86
                                 STOCK
2              DISP  INVEST.VTD  0                 02            01     AMEX
                                 AMEX                                 BOND
                                 BOND                                 BOUGHT_FEB_86
                                 BOUGHT_FEB_86
3              DISP  INVEST.VTD  0                 02            01     MONEY_MARKET
                                 BOUGHT_JUN_86                        BOUGHT_JUN_86
                                 MONEY_MARKET

(C - invalid continuation,  E - expired,  F - referenced form,
 K - invalid keyword access,  M - multiply defined,  N - nonexistent,
 O - out of range,  P - invalid PCR,  S - invalid successor access,
 U - unreferenced)
```

(continued on next page)

Example A–1 (Cont.): Infobase Verification Report

```
IVU.TXT 23-MAR-1989 09:32:15.06  VAX VTX Infobase Verification Utility V4.0  Page 4

                              +------------------+
                              | Keyword Synopsis |
                              +------------------+

There are no nonexistent keywords.
```

(continued on next page)

Example A–1 (Cont.): Infobase Verification Report

```
IVU.TXT 23-MAR-1989 09:32:15.07  VAX VTX Infobase Verification Utility V4.0  Page 5

                          +-------------------------+
                          | Keyword Cross Reference |
                          +-------------------------+

Keyword          Flags   Page Number   Keyword File      Title          Referenced By...
-------          -----   -----------   ------------      -----          ----------------
AMEX                     2             INVEST_2.VTK      Amex Bond      2
BOND                     2             INVEST_2.VTK      Amex Bond      2
BOUGHT_FEB_86            2             INVEST_2.VTK      Amex Bond      2
BOUGHT_JAN_86            1             INVEST_1.VTK      NY Stock       1
BOUGHT_JUN_86            3             INVEST_3.VTK      Money Market   3
HELP                     01            INVEST_0.VTK      help menu      01
MAIN_MENU                0             INVEST_0.VTK      Menu Page      0
MONEY_MARKET             3             INVEST_3.VTK      Money Market   3
NY                       1             INVEST_1.VTK      NY Stock       1
STOCK                    1             INVEST_1.VTK      NY Stock       1

(N - nonexistent)
```

Appendix B

Account Usage Record Format

Table B–1 describes the characteristics of each of the 18 possible fields in an account usage record. These records are generated by the VTXACU Utility and are useful primarily for customer-written billing applications.

Table B–1: Fields in the Account Usage Record

Starting Byte Position	Ending Byte Position	Description of Field
0	31	VTX account name, including the node name and two colons. This field is 32 characters long and is left-justified with blank fill.
32	32	Record type byte. This field is a 1-byte integer. It contains the value 0 if the usage record is for a subscriber, 2 if the record is for an IP account, and 3 if the record is for a VAX VTX Workbench IP.
33	36	Pages accessed. This field is a 4-byte integer giving the number of pages a subscriber has accessed in the infobase since the last RESET command. For IP and Workbench IP accounts records, this field is always 0.
37	40	VTX login count. This field is a 4-byte integer.
41	48	Last login date. This field consists of 8 bytes in VMS date format.

(continued on next page)

Table B–1 (Cont.): Fields in the Account Usage Record

Starting Byte Position	Ending Byte Position	Description of Field
49	56	Last reset date. This field consists of 8 bytes in VMS date format.
57	64	Accumulated connect time. This field consists of 8 bytes in VMS date format. For an explanation of VMS delta time, see the VMS system services documentation.
65	68	Page insertions. For subscriber and Workbench IP records, this field is always 0. For IP records, this field is a 4-byte integer giving the number of pages that an IP account has inserted into the infobase.
69	72	Page extractions. For subscriber and Workbench IP records, this field is always 0. For IP records, this field is a 4-byte integer giving the number of pages that an IP account has extracted from the infobase.
73	76	Page deletions. For subscriber and Workbench IP records, this field is always 0. For IP records, this field is a 4-byte integer giving the number of pages that an IP account has deleted from the infobase.
77	80	Reserved for future use. Value is 0.
81	84	Keyword insertions. For subscriber and Workbench IP records, this field is always 0. For IP records, this field is a 4-byte integer giving the number of keywords that an IP account has inserted into the infobase.
85	88	Keyword extractions. For subscriber and Workbench IP records, this field is always 0. For IP records, this field is a 4-byte integer giving the number of keywords that an IP account has extracted from the infobase.

(continued on next page)

Table B–1 (Cont.): Fields in the Account Usage Record

Starting Byte Position	Ending Byte Position	Description of Field
89	92	Keyword deletions. For subscriber and Workbench IP records, this field is always 0. For IP records, this field is a 4-byte integer giving the number of keywords that an IP account has deleted from the infobase.
93	96	Pages reserved. For subscriber and IP records, this field is always 0. For Workbench IP records, this field is a 4-byte integer giving the count of Workbench pages currently reserved by the Workbench IP's account.
97	100	Pages loaded to the Workbench library. For subscriber and IP records, this field is always 0. For Workbench IP records, this field is a 4-byte integer giving the count of Workbench pages that the Workbench IP has loaded since the last RESET command.
101	104	Pages updated. For subscriber and IP records, this field is always 0. For Workbench IP records, this field is a 4-byte integer giving the number of pages that the Workbench IP has updated since the last RESET.
105	112	Last update. For subscriber and IP records, this field is always 0. For Workbench IP records, this field uses VMS date/time format to indicate the last time that this account used the UPDATE option from the Workbench Utility.

Appendix C

Server Log Record Format

The server can log eight types of records to its log file. The eight types and their numeric values are:

- NEWSESS (1)—Session created
- DELSESS (2)—Session deleted
- CONNIN (3)—Incoming connect
- CONNOUT (4)—Outgoing connect
- DISCON (5)—Disconnected DECnet link
- DBSECT (6)—Infobase usage
- LOG (9)—A log record initiated by a remote application (VAS/ELK)
- PAGE (10)—Logging of an accessed page

The formats of the eight record types are described in Table C–1 through Table C–4. The symbols used in the Format column of the table stand for the following:

- B - Byte
- C - Character string
- DT - VMS date and time format

Table C–1: Server Log Record Format for NEWSESS, CONNIN, CONNOUT, DISCON, and PAGE

Field Name	Bytes	Format	Contents
TIME	8	DT	Current date/time
TYPE	1	B	Type of server log record
IPNAME	8	C	Server name
SID	8	B	Session ID
UNAME	32	C	Username
PAGE[1]	14	C	Page number
CHARGE	1	B	Charge

[1]Format depends on how the page was created. See Section C.1

Table C–2: Server Log Record Format for DELSESS

Field Name	Bytes	Format	Contents
TIME	8	DT	Current date/time
TYPE	1	B	Type of server log record
IPNAME	8	C	Server name
SID	8	B	Session ID
ACCCNT	4	B	Access count

Table C–3: Server Log Record Format for DBSECT

Field Name	Bytes	Format	Contents
TIME	8	DT	Current date/time
TYPE	1	B	Type of server log record
IPNAME	8	C	Server name
SID	8	B	Session ID

(continued on next page)

Table C–3 (Cont.): Server Log Record Format for DBSECT

Field Name	Bytes	Format	Contents
REQCNT	4	B	Request count
LOWPG	14	C	Low page number
HIPG	14	C	High page number

Table C–4: Server Log Record Format for LOG

Field Name	Bytes	Format	Contents
TIME	8	DT	Current date/time
TYPE	1	B	Type of server log record
IPNAME	8	C	Server name
SID	8	B	Session ID
DATALEN	1	B	Data length
DATA	64	C	Data

C.1 Format of the Page Number Field

The format of the 14-byte page number field listed in Table C–1 depends on the following:

- If the page was created with VTX Version 2.n VTXUPD or VTX/VALU Version 2.0 RUSL applications, the page number is straight ASCII text.
- If the page was created with a VTX Version 3.0 or Version 4.0 component, the following format is used:
  - Bytes 1 to 12—ASCII representation of the VTX page number of the page.
  - Bytes 13 and 14—Binary representation of the continuation page number assigned to the page. The continuation page number is a

two-byte field that can contain the values 0 to 32767. The format of bytes 13 and 14 is as follows:

* Byte 13—Continuation page number high-order byte.

  The seven low-order bits of this byte make up the high-order byte value. Bit 8 (the high-order bit) has a special meaning. It is 0 for primary pages (continuation page number of 0), and set for all continuation pages (continuation page number non-zero).

* Byte 14—Continuation page number low-order byte.

Appendix D

VAX VTX Workbench Library Files

This appendix describes the VAX VTX Workbench library files and includes information about the potential amount of disk space needed by the Workbench library. For information on reclaiming space in the Workbench library after deletion of a large number of infobase pages, see Section G.5 in Appendix G.

The Workbench server maintains a library of files for managing Workbench IP modifications:

- Workbench control file (VTX$WBSRV_WCF.VTX)

  The Workbench control file stores the current representation of every page created or modified by Workbench IPs. Pages are placed in this file by the UPDATE operation and fetched from the file by the LOCATE, EXTRACT, or INCLUDE operation, or by navigation through a menu (with the SELECT operation). This file stores control information used by the Workbench Utility and the Workbench server, including:

  - Page name
  - Assigned VTX page number
  - Workbench group code
  - Assigned prefix
  - Reserved status
  - When the page was last updated in the Workbench library
  - When the page was last reserved and by whom

  The Workbench control file is the largest of the four Workbench library files. This file can be up to one and one-half times the size of the corresponding VTX infobase page files.
- Workbench prefix file (VTX$WBSRV_PAF.VTX)

The Workbench prefix file is used to generate VTX page numbers for newly created Workbench pages. The Workbench Utility bases the page numbers on the prefix values the Workbench IP specifies, or accepts by default, when creating the pages. The Workbench server checks the VTX account file to validate any prefix value a Workbench IP specifies.

As the VTX operator, you enter prefix values in this library file from the VTXACU Utility. See the descriptions of the OPEN/PREFIX, ADD/PREFIX, MODIFY/PREFIX, DELETE/PREFIX, SHOW/PREFIX, and CLOSE/PREFIX commands in Chapter 3.

The Workbench prefix file should remain fairly small. The records in this file are less than 100 bytes per record. Each prefix you define has one record, and the Workbench server updates the records frequently. The record size and the number of records does not change during these record updates.

- Update information file (VTX$WBSRV_UIF.VTX)

  The update information file is a temporary VTD page file. It temporarily stores the display portion of new and modified pages during an UPDATE operation. The display portion of a file can include text for display pages that a Workbench IP creates and text for menu pages that the Workbench Utility generates.

  This file contains the same page control records, keyword control records, page data records, and form field definition records found in a VTD page file. Each updated page has an average of four to five records. Before the UPDATE operation is completed, the listed pages are moved from the update information file to the online VTX infobase.

- Update control file (VTX$WBSRV_UCF.VTX)

  The information in the update control file is temporary. This file temporarily stores a list of new and modified pages during an UPDATE operation.

  The records in this file are less than 100 bytes per record. There is one record for each page in the Workbench library during the UPDATE operation.

Appendix E

VTX Logicals

This appendix contains a table that you can use for quick reference to the VTX logicals. Table E–1 lists the logicals in alphabetical order. Note that when a logical name is going to be used by a detached process, the logical has to be defined at least at group level for that detached process to see the logical. The detached processes include the following:

- VAX VTX server
- Update server
- VAX VTX Workbench server
- Concentrator
- VAS

Table E–1: VTX Logical Name Reference

Logical Name	Definition	Comments
DSL$REQUIRE	SYS$SYSROOT:[TCPLIB]	This logical is defined by an application programmer and is used when a modified TCP is to be built.
TCP$LIB	SYS$SYSROOT:[TCPLIB]	This logical is defined by an application programmer and is used when a modified TCP is to be built.

(continued on next page)

Table E–1 (Cont.): VTX Logical Name Reference

Logical Name	Definition	Comments
VTX$ACF	filename.VTA Default: SYS$LOGIN:VTXACF.VTA	This logical, which is defined in VTXSERVER.COM or by the VTX operator, defines the VTX account file. For information about defining this logical, see Chapter 2 in this manual.
VTX$BPDF	Base page determination file with any file name Default: SYS$LOGIN:VTXBASE.TXT	This logical is defined in VTXSERVER.COM or by the VTX operator. For information about defining this logical, see Chapter 2 in this manual.
VTX$IAF	filename.VTI Default: VTXIAF.VTI is recommended but not required.	This logical, which is defined by an IP, defines the VTXAPMS index assignment file. For information about defining this logical, see Part IV in the *VAX VTX Information Provider's Guide*.
VTX$PADWAIT	Timeout period, in seconds, for the amount of time a page is to remain displayed on a terminal before the main menu is redisplayed. Also, the timeout period for terminal and LAT ports attached to a VTX server through a concentrator. Default: None	This logical is defined by the VTX operator or any other VTX user.

(continued on next page)

Table E–1 (Cont.): VTX Logical Name Reference

Logical Name	Definition	Comments
VTX$PAF	filename.VTP Default: VTXPAF.VTP is recommended but not required.	This logical, which is defined by an IP, defines the VTXAPMS page assignment file. For information about defining this logical, see Part IV in the *VAX VTX Information Provider's Guide*.
VTX$REQUIRE	SYS$SYSROOT:[TCPLIB]	This logical is defined by an application programmer and is used when a modified TCP is to be built.
VTX$SERVER	node::"n="	This logical, which is defined by the VTX operator or subscriber, defines the VTX server. Although there is no specific default, 43 is the DECnet object number that is reserved for VTX on VMS. For information about defining this logical, see Chapter 1 in this manual.

(continued on next page)

Table E–1 (Cont.): VTX Logical Name Reference

Logical Name	Definition	Comments
VTX$SERVERn	node::"n="	This logical, which is defined by the VTX operator, defines the local VTX failover servers. You can define up to eight failover servers (from 02 to 09). There is no specific default. For information about defining failover server logicals, see Chapter 2 in this manual.
VTX$UPDSRV	node::"n="	This logical, which is defined by the VTX operator or IP, defines the update server. Although there is no specific default, 56 is the DECnet object number that is used if no number is specified on the VTXCTL START COMMUNICATION command. For information about defining this logical, see Chapter 2 in this manual.
VTX$VTU_FILES	directory-name Default: SYS$COMMON:[VTU_FILES]	This logical, which is defined by the VTX operator in the startup file that starts the VTX print queue (VTX$QUEUE), defines the directory where standard and extended VTU files are placed.

(continued on next page)

Table E–1 (Cont.): VTX Logical Name Reference

Logical Name	Definition	Comments
VTX$WB_FILES	directory-name Default: SYS$COMMON:[VTX$WB_FILES]	This logical, which is defined by the VTX operator in the startup file that starts the VTX print queue (VTX$QUEUE), defines the directory where the Workbench print files are placed.
VTX$WB_SERVER	node::"n="	This logical, which is defined by the VTX operator or IP, defines the Workbench server on a local or remote node. Although there is no specific default, 56 is the DECnet object number that is used if no number is specified on the VTXCTL START COMMUNICATION command. For information about defining this logical, see Chapter 1 in this manual.
VTX$WB_STYLEFILES	directory-name Default: None	This logical, which is defined by the Workbench IP or the VTX operator, defines the directory where the Workbench style files are kept. For information about defining this logical, see Part II in the *VAX VTX Information Provider's Guide*.

Appendix F

File Conversion

This appendix explains how to convert the following files so they are compatible with VTX Version 4.0:

- Page (VTD) files from VTX Version 2.1 or Version 3.n, or both
- VAX VTX Workbench Utility library files from VTX Version 3.n
- APMS index assignment files from VTX Version 3.n

F.1 Page File Conversion

VTX page files (VTD files) created prior to Version 4.0 must be converted to VTX Version 4.0 format before you can use them with a Version 4.0 server, update server, or Workbench server. The VAX VTX Version 4.0 kit includes a page file conversion program, VTXPFC_V4_CONVERT.COM, that you must use to convert pre-Version 4.0 page files.

Use the following procedure to convert Version 2.1 and Version 3.n page files to VTX Version 4.0 format:

1. Create a backup copy of the pre-Version 4.0 file you are converting. For example:

```
$  COPY VTXMAIN.VTD OLD_VTXMAIN.VTD
```

2. Execute the conversion setup command file, as follows:

```
$  @SYS$SYSROOT:[VTX$LIBRARY]VTXPFC_V4_CONVERT.COM
```

The command procedure sets up the conversion, defining the conversion logicals and displaying the following syntax to illustrate how to perform the conversion:

```
$ VTXPFC_V4_CONVERT input-page-file.VTD [output-page-file] -
_$ [/FDL=fdl-file]
```

The name of the converted file defaults to the input file name if you do not specify an output file.

Optionally, you can specify the /FDL qualifier and use the default FDL, SYS$SYSROOT:[VTX$LIBRARY]VTXPFC_V4_FDL.FDL, to optimize the new page file's attributes. The conversion setup command file defines a logical, VTXPFC_V4_FDL, that points to the default FDL. For information about the file definition language, see the *Guide to VMS File Applications*.

NOTE

Unless you are familiar with the file definition language, you should not specify an FDL file. File optimization will be done for you without specifying an FDL file.

3. Perform the conversion, using the VTXPFC_V4_CONVERT logical and, optionally, an FDL. For example:

```
$  VTXPFC_V4_CONVERT VTXMAIN.VTD NEW_V4_VTXMAIN.VTD
500 pages converted ...
%VTX-I-PFC_TOTAL, A total of 892 pages were converted
```

4. Copy back the converted page file. For example:

```
$  COPY NEW_V4_VTXMAIN.VTD VTXMAIN.VTD
```

F.2 Workbench Library File Conversion

Workbench library files created prior to VTX Version 4.0 must be converted to Version 4.0 format before you can use them with a Workbench server. The VAX VTX Version 4.0 kit includes a Workbench library conversion program, VTXVLC_V4.COM, that you must use to convert pre-Version 4.0 library files.

Use the following procedure to convert a VTX Version 3.0 or 3.1 library to VTX Version 4.0 format:

1. Create backup copies of the pre-Version 4.0 Workbench library files you are converting. For example:

```
$  COPY [MYLIB]VTX$VISTASRV_*.VTX *.VTX_OLD
```

2. Perform the conversion, as follows:

```
$ @SYS$SYSROOT:[VTX$LIBRARY]VTXVLC_V4 [input-directory-spec] -
_$ [output-directory-spec]
```

   The *input-directory-spec* is the name of the VMS directory where the Workbench library files reside. If you do not specify an input directory, the conversion program tries to convert the library files in SYS$LOGIN.

   The *output-directory-spec* is the name of the VMS directory where the converted Workbench library files are placed. If you do not specify an output directory, the conversion program places the files in the input directory.

   The conversion program converts the Workbench library files, naming them VTX$WBSRV_*.VTX_NEW

3. Copy back the converted Workbench library files. For example:

```
$  COPY/PROTECTION=(SYSTEM:RW,OWNER:RW,GROUP:RW,WORLD) *.VTX_NEW *.VTX
```

F.3 APMS Index Assignment File Conversion

VTXAPMS Utility index assignment files (IAF) created prior to Version 4.0 must be converted to VTX Version 4.0 format before you can use them with a Version 4.0 server. The conversion procedure realigns record field sizes to Version 4.0 standards.

VAX VTX Version 4.0 provides a command procedure file (VTXIAF_V4_CONVERT.COM) that sets up the APMS conversion utility (VTXIAF_V4_CONVERT).

Use the following procedure to use the utility to convert Version 3.n APMS index assignment files (defined by the logical VTX$IAF) to VTX Version 4.0 format:

1. Create a backup copy of the pre-Version 4.0 file you are converting. For example:

```
$  COPY VTXIAF.VTI OLD_VTXIAF.VTI
```

2. Execute the conversion setup command file, as follows:

```
$  @SYS$SYSROOT:[VTX$LIBRARY]VTXIAF_V4_CONVERT.COM
```

   The command procedure sets up the conversion, defining the conversion logicals and displaying the following syntax to illustrate how to perform the conversion:

```
$ VTXIAF_V4_CONVERT input-file [output-file] [/FDL=fdl-file]
```

   The name of the converted file defaults to the input file name if you do not specify an output file.

   Optionally, you can specify the /FDL qualifier and use the default FDL, SYS$SYSROOT:[VTX$LIBRARY]VTXFDL_V4_CONVERT.FDL, to optimize the new page file's attributes. The conversion setup command file defines a logical, VTXIAF_V4_CONVERTFDL, that points to the default FDL. For information about the file definition language, see the *Guide to VMS File Applications*.

3. Perform the conversion, using the VTXIAF_V4_CONVERT logical. For example:

```
$  VTXIAF_V4_CONVERT VTXIAF.VTI VTXIAF_CONVERTED.VTI
```

4. Copy back the converted index assignment file. For example:

```
$  COPY VTXIAF_CONVERTED.VTI VTXIAF.VTI
```

Appendix G

Problem Solving

This appendix contains information you can use for help when trying to resolve problems you might encounter with VAX VTX.

Use the following guidelines when working on problem solving:

- VTX error message documentation

  If a VTX error message is generated, check the appropriate error message appendix in the VAX VTX documentation before searching in this appendix for help with your problem. In addition to this guide, the following VAX VTX documents contain error message appendixes:

  - *VAX VTX Subscriber's Booklet*
  - *VAX VTX Information Provider's Guide* (separate appendixes in Parts II through V)

  All error message appendixes are the last appendix in each document.

- VTXIVU VERIFY command and VTXUPD SHOW command

  The output from the VERIFY command in the VTX Infobase Verification Utility (VTXIVU) and from the SHOW command in the VTX Update Utility (VTXUPD) is displayed in 132 columns. Before using these commands, set your terminal width to 132 columns.

- Screen output

  Consider directing the output from a VTXUPD EXTRACT command to the screen, rather than to a file, by specifying /OUTPUT=TT: for screen output.

Problems are organized in this appendix as follows:

- VAX VTX Subscriber problems
- VAX VTX Operator problems
- VAX VTX Information provider problems

- VAX VTX TCP command procedure problems

Problems are arranged alphabetically within each section. Each section begins with a list of all the problems in the section.

In addition to the specific problem sections, Section G.5 contains information on enhancing infobase performance.

G.1 VAX VTX Subscriber Problems

This section describes the following subscriber problems:

- Subscriber cannot access a specified page
- Subscriber cannot connect to remote server or application
- Subscriber cannot connect to VTX—no base page
- Subscriber cannot connect to VTX—object does not exist

G.1.1 Subscriber Cannot Access a Specified Page

Explanation:

At the DCL prompt, the subscriber tries one of the following:

- To invoke VTX by specifying the VTX command followed by a page number or keyword
- After invoking VTX, to select an option from a menu, to use the FIND function and enter a page number or keyword, or to copy or print a page

However, page access is denied and the following message is displayed:

```
The specified page is not accessible
```

Causes and Solutions:

There are five possible causes and solutions. Review them in sequence.

1. The specified page does not exist.

   There are three ways to confirm whether or not a page exists:

   - Use the VAX VTX Workbench Utility LOCATE option. Select the LOCATE option and enter a page name. If information about the page is displayed, the page exists.
   - Use the VTXUPD SHOW command. Enter SHOW page-number at the UPD> prompt. If information about the page is displayed, the page exists.

- Use the Infobase Verification Utility (VTXIVU) to generate a report that displays information about all the pages that exist in an infobase. If you use the /CROSS_REFERENCE qualifier with VTXIVU, the VTXIVU report will give such information as the page range for a specific page file, a list of pages that exist but are not referenced, a list of pages that are referenced but do not exist, and a list of pages that reference a specific page. See Chapter 4 for information on using the VTXIVU Utility.

If information is displayed for the specified page, the page exists but might be incorrectly referenced. See solution 2 for more information.

If no information is displayed for the specified page, the page does not exist, the page file is not open, or the page file was opened incorrectly. See solution 3 for more information.

2. The specified page exists, but it is not correctly referenced.

   Possible reasons for errors in referencing pages are:

   - Incorrect page numbers either on the page or in a CHOICE entry on the menu page

     This could be caused by typographical errors, errors in using prefixes, or errors in the defaults in the VTXUPD Utility. Use the VTXIVU Utility to verify the following:

     - The page in the infobase has the page number specified in the infobase design
     - The reference to the page in the referencing menu or in keywords assigned to the page is accurate

   - Incorrect or nonexistent keywords

     This could be caused by typographical errors, omission of the /OPTIONS qualifier on the ADD or COMPOSE command, or not having the keyword file open when the page is added to the infobase. Without the /OPTIONS qualifier, VTX includes keywords in the display portion of the page rather than in the keyword file. If the keyword file is not open, keywords are not added to the file.

     Use the VTXUPD SHOW command or the VTXIVU Utility to check that the keywords exist, that they are correct, and that they are appropriately placed. If necessary, reenter the keywords.

   - Incorrect closed user groups

     If the subscriber cannot access a page because the page is not in a closed user group that the subscriber has access to, the subscriber will see the following message when trying to access the page:

     ```
     You may not access the desired page
     ```

Use the VTXUPD SHOW command to find out what closed user group is assigned to the page. Then use the SHOW command in the VTX Account Control Utility (VTXACU) to verify if the subscriber is assigned that closed user group code. If the subscriber is not assigned the closed user group code, verify if you want the subscriber to have access to the pages in that group. If you do, use the VTXACU MODIFY command to change the subscriber's group code access.

- Incorrect page access restrictions

  The page might have the characteristics NODIRECT or NOSAVE assigned to it. These characteristics are assigned either with the Direct and Save fields in the General Page Control Information form of the Workbench Utility or with the /NODIRECT and /NOSAVE qualifiers on the VTXUPD ADD or COMPOSE commands.

  If the characteristic NODIRECT is assigned, the page will be available only as a selection from a menu. If a subscriber tries to access a page that has the NODIRECT characteristic by using a page number or keyword, the following message is displayed:

  ```
  That page not available directly
  ```

  If the NOSAVE characteristic is assigned, the subscriber can view the page, but cannot print or save it.

  To change these characteristics on a page created with the Workbench Utility, use the LOCATE option to retrieve the page from the Workbench server. Then display the General Page Control Information form, and reset the Direct and Save fields.

  To change these characteristics on a page created with the VTXUPD Utility, use the EXTRACT command to extract the page, reset the characteristics in the VTU file, and update the infobase again with the modified page.

3. The page file or keyword file that contains the specified page is not open, or the files were opened in the wrong sequence.

   If the page exists in the infobase and it is in the expected format, check to see what files are open to the server. Issue the VTXCTL command SHOW FILES/ALL at the SRV> prompt to see a listing of all the files open to the infobase, the ranges that are active for those files, and the order in which they were opened.

The order in which files are opened is important. When VTX tries to retrieve a page from the page files, VTX looks in only one file—the last file opened whose range covers the page number of the specified page. For information on page ranges, see Part III in the *VAX VTX Information Provider's Guide*.

4. The page file (VTD file) was not opened on the VTX server when the page was added to the infobase.

   Connect to the VTX server through the VTX Control Utility (VTXCTL) and open the page file with the OPEN/PAGE command. For example:

   ```
   SRV> OPEN filename.VTD
   ```

   If keywords are also being added to the infobase, open the keyword file (VTK file). Then access VTXUPD again and reopen the page and keyword (if used) files and update the infobase.

5. The specified page is a remote page that cannot be accessed.

   - If you see the message *That information not available*, there is probably a problem with the remote connection. See Section G.1.2 for more information.
   - If you see another message, reverify the three previous solutions in this problem to ensure that you did not overlook the cause.

     If you do not find the cause, check solution 2 in Section G.1.2.

G.1.2 Subscriber Cannot Connect to Remote Server or Application

Explanation:

Subscribers receive the following message when trying to access a remote page either directly or as a selection from a menu:

```
That information not available
```

Causes and Solutions:

There are four possible causes and solutions. Review them in sequence.

1. There is a conflict between the remote name specified in the Workbench or VTXUPD Utilities and the remote definition specified in the VTXCTL Utility.

   The *remote name* is the name VTX uses to identify the remote server or application. If the remote page is created with the Workbench Utility, the remote name is specified on the Remote Page Information form. If the remote page is created with the VTXUPD Utility, the remote name is

specified with the /TYPE=REMOTE=remote-name qualifier on the ADD or COMPOSE command.

To see what remote name was specified with the Workbench Utility, use the LOCATE option to locate the page. Then use the REMOTE option to display the Remote Page Information form.

To see what remote name was specified with the VTXUPD Utility, access the VTXUPD Utility and enter the SHOW command followed by the remote page number. For example:

```
UPD> SHOW 10
```

VTX displays information similar to the following about remote page 10:

```
Page Coding Group Type Charge Created   Expires Server Help Page Keyword
---- ------ ----- ---- ------ --------- ------- ------ ---- ---- -------
10   ASCII        R           12-FEB-1989       TOKYO            NEWS
```

Check this information to see that the page type is R, indicating a remote page. Check the remote name displayed under the Server heading (TOKYO in this example). If this information is incorrect or no page information is displayed, you must add the remote page.

The *remote definition* is specified with the REMOTE command in the VTXCTL Utility. This definition must use the same remote name that was used in the Workbench Utility Remote Page Information form or in the VTXUPD Utility ADD or COMPOSE command. To see the remote definition, enter the SHOW REMOTE command at the SRV> prompt in the VTXCTL Utility on the local server. Specify the remote name with the /NAME qualifier. For example, if the remote name is TOKYO, specify the following command:

```
SRV> SHOW REMOTE/NAME=TOKYO
```

VTX provides information similar to the following about the remote server named TOKYO:

```
Remote Name   Qualifiers   DECnet Specification
-----------   ----------   --------------------
TOKYO         /Trust       TOKYO::"201="
```

If the message *Specified remote name not found* is displayed, there is no remote definition for the remote page. You must define the remote name with the VTXCTL REMOTE command.

2. The page goal or keyword goal for the remote page does not exist.

   When you add a remote page, it is possible to specify a page goal or a keyword goal that identifies the first page the subscriber will see at

the remote node. For example, a page goal is added with the following VTXUPD command:

```
UPD> ADD 50/TYPE=REMOTE=TOKYO/NUMGOAL="65"
```

Page and keyword goals can also be added on the Remote Page Information form in the Workbench Utility.

In the preceding example, when page 50 is accessed on the local server, a connection is made to the remote server TOKYO. Once that connection is established, the remote server displays page 65. If the infobase does not contain page 65 when the subscriber accesses page 50, the subscriber will see the error message *The requested page doesn't exist.*

To see the page goal or keyword goal on a page created with the Workbench Utility, use the LOCATE option to retrieve the remote page from the Workbench server, and then display the Remote Page Information form. To see the page goal or keyword goal on a page created with the VTXUPD Utility, enter the EXTRACT/PAGE command with the remote page number at the UPD> prompt. If you specify the qualifier /OUTPUT=TT:, the information will be displayed on your terminal.

To see if the page or keyword goal points to an existing page, use the VTXUPD SHOW command to display the page.

3. The DECnet specification in the remote definition is incorrect.

   If the DECnet specification is incorrect, the remote connection will fail. The DECnet specification is shown with the SHOW REMOTE command at the SRV> prompt, as explained in the previous solution. The format of the DECnet specification is:

   ```
   node-name::"object-number="
   ```

   For example: GUMBY::"43="

   Note that unlike the DCL definition of a remote server, this definition requires only one set of quotation marks. To correct the remote definition, reenter the remote definition using the VTXCTL REMOTE command. The new REMOTE command overwrites the previous one if you use the same remote name.

4. The DECnet link from the local server to the remote server is not available.

   If the previous solutions do not reveal the problem, it is possible that there is no error, but the desired remote link is not available. See your VMS system operator for more information.

G.1.3 Subscriber Cannot Connect to VTX—No Base Page

Explanation:

The following error message is displayed after the subscriber enters VTX at the DCL prompt:

```
%VTX-I-BRKNOBPAGE, No base page
```

There are two files that control a subscriber's access to the infobase:

- VTX Account Control File (VTXACF.VTA)

  This file lists all VTX subscribers and information providers who have access to VTX. It sometimes includes a guest account that lets any subscriber access VTX without account validation.

- Base Page Determination File (BPDF)

  This file designates a base page for individual subscribers or groups of subscribers. The base page is the first page a subscriber sees when starting VTX. The default BPDF, VTXBASE.TXT, is found in SYS$LOGIN of the VTX operator's account.

Note that if the subscriber appends a page number or a keyword to the VTX command, that page or keyword is used to display the first page. The VTXACF.VTA file is checked to see if the subscriber should have access to the page, but the BPDF is not checked.

If you create a new BPDF, modify the existing BPDF, or transfer another BPDF into your account, you must use the LOAD BASE command at the VTXCTL SRV> prompt to activate it.

Causes and Solutions:

There are five possible reasons why the subscriber might receive the No Base Page message. Review them in sequence.

1. There is an invalid VTX symbol definition.

   The VTX symbol definition might point to a command procedure that redefines the logical VTX$SERVER or to a command procedure that includes an invalid page or keyword parameter.

   To see VTX symbol definitions, enter the following command at the DCL prompt:

   ```
   $ SHOW SYMBOL VTX
   ```

   - If a symbol for VTX is not displayed, but the following message is displayed, you do not have a VTX symbol definition:

```
%DCL-W-UNDSYM, undefined symbol -- check validity and spelling
```

Go to solution 2.

- If one or more symbols for VTX are displayed, delete them using one or both of the following commands at the DCL prompt:

```
$ DELETE/SYMBOL VTX
$ DELETE/SYMBOL/GLOBAL VTX
```

The first command deletes symbols in the local symbol table, which are indicated by one equal sign (=) in the symbol definition. The second command deletes symbols in the global symbol table, which are indicated by two equal signs (==) in the symbol definition. All VTX symbols must be deleted.

2. The subscriber does not have a valid account in the VTX Account Control File and there is no guest account.

   Access the VTX Account Control Utility (VTXACU) and enter the SHOW username command at the ACU> prompt. For example:

```
ACU> SHOW GUMBY::BRONSON
```

   Accounts are specified with a node name and username. Wildcards (*) are not allowed with the SHOW command. If you do not specify a node, the default is the node you are on. If the account is found and is correct, check the Base Page Determination File, as explained in the next solution.

   If the specified account does not exist, an error message is displayed. However, the subscriber might still have access if a guest account exists. Check to see if there is a guest account in VTXACU by entering the following command:

```
ACU> SHOW %GUEST%
```

   If a guest account exists, VTX allows access to any subscriber. If there is no guest account and the specified account name does not exist, the VTX operator must add the account name or a guest account to the VTXACF.VTA file. For example:

```
ACU> ADD %GUEST%
```

3. There are problems with the Base Page Determination File (BPDF), called VTXBASE.TXT.

   Check the BPDF entries in the file VTXBASE.TXT. This file should be in the SYS$LOGIN directory of the operator's account. One of the entries in the BPDF should match the user. This could be done with a specific user entry, a wildcard entry, or a guest account, as shown in the following BPDF example.

```
                Source    Source    Language                Base
User Name       Server    Page      Preference   Protocol   Page
-------------   ------    ------    ----------   --------   ----
GUMBY::BRONSON  *         *         *            *          10
*               *         *         *            DECTALK    00
%GUEST%         *         *         *            *          0
```

The wildcard (*) indicates that the field is not being checked to determine the subscriber's base page entry. Therefore, in this file, the user BRONSON on node GUMBY is always routed to page 10. All DECtalk users are always routed to page 00 and all other users are always routed to page 0.

Note that the BPDF is scanned in sequential order. The first entry that matches the user's profile is used. For example, in the BPDF that follows, GUMBY::BRONSON would always be routed to page 0 even though there is a specific entry indicating a routing to page 10. Whereas in the preceding BPDF, GUMBY::BRONSON would always be routed to page 10.

```
                Source    Source    Language                Base
User Name       Server    Page      Preference   Protocol   Page
-------------   ------    ------    ----------   --------   ----
*               *         *         *            *          0
GUMBY::BRONSON  *         *         *            *          10
```

Note that if any changes are made to the BPDF after the server is started, the VTX operator must issue the LOAD BASE command at the VTXCTL SRV> prompt to have the changes take effect.

4. The specified keyword or entry page does not exist.

   Use the VTXIVU Utility to verify if the page or keyword exists. See Chapter 4 for information on using the VTXIVU Utility.

   If the keyword does not exist and you want it in the infobase, it must be added with the Workbench Keyword Information form or the VTXUPD ADD/KEYWORD command. For example:

   ```
   UPD> ADD/KEYWORD MAIN 10
   ```

   If the page does not exist in the infobase, it must be added with either the ADD CHOICE option in the Workbench Utility or the ADD/PAGE command in the VTXUPD Utility, or you must change the BPDF entry page to a page that exists.

   Note that in all cases, the keyword and page files must be open before you add keywords or pages to the infobase.

5. The specified entry page is not accessible.

   There are many causes for a page not being accessible. For more information, see Section G.1.1.

G.1.4 Subscriber Cannot Connect to VTX—Object Does Not Exist

Explanation:

The following error message is display after the subscriber enters VTX at the DCL prompt:

```
%VTX-I-SRVNOOBJ, Can't connect to server -- object doesn't exist
```

Causes and Solutions:

There are four possible reasons why the subscriber might receive this message. Review them in sequence.

1. There is an invalid VTX symbol definition.

   The VTX symbol definition might point to a command procedure that redefines the logical VTX$SERVER or to a command procedure that includes an invalid page or keyword parameter.

   To see VTX symbol definitions, enter the following command at the DCL prompt:

   ```
   $ SHOW SYMBOL VTX
   ```

   - If one or more symbols for VTX are displayed, delete them using one or both of the following commands at the DCL prompt:

     ```
     $ DELETE/SYMBOL VTX
     $ DELETE/SYMBOL/GLOBAL VTX
     ```

     The first command deletes symbols in the local symbol table, which are indicated by one equal sign (=) in the symbol definition. The second command deletes symbols in the global symbol table, which are indicated by two equal signs (==) in the symbol definition. All VTX symbols must be deleted.

   - If a symbol for VTX is not displayed, but the following message is displayed when you issue the SHOW SYMBOL command, you do not have a VTX symbol definition.

     ```
     %DCL-W-UNDSYM, undefined symbol -- check validity and spelling
     ```

     Go to solution 2.

2. There is an invalid definition, or no definition, for VTX$SERVER.

   To see what is defined for VTX$SERVER, enter the following command at the DCL prompt:

   ```
   $ SHOW LOGICAL VTX$SERVER
   ```

You should see an entry similar to one of the following, where GUMBY is the nodename defined and 43 is the DECnet object number defined:

- "VTX$SERVER" = "GUMBY::"43="" (LMN$PROCESS_TABLE)
- "VTX$SERVER" = "GUMBY::"43="" (LMN$JOB_TABLE)
- "VTX$SERVER" = "GUMBY::"43="" (LMN$GROUP_TABLE)
- "VTX$SERVER" = "GUMBY::"43="" (LMN$SYSTEM_TABLE)
- "VTX$SERVER" = "0::"43=""
- %SHOW-S-NOTRAN, no translation for logical name VTX$SERVER

Verify that the node name and object number are correct and that the equal sign and quotation marks are correctly placed.

If the logical VTX$SERVER is defined at more than one level, VMS will list the logicals in the order shown in the preceding example. That is, the process table definition is used first, followed by the job table, group table, and system table definitions.

If the logical VTX$SERVER points to a VAX cluster node name, the node name should indicate a 0, rather than a specific node name. For example, "0::"43="", rather than "GUMBY::"43="".

If the logical name is correctly defined and the problem still exists, go to solution 3.

If the definition is not correct or there is no translation for the logical VTX$SERVER, you must define it using the DEFINE command in the following format:

```
$ DEFINE VTX$SERVER node-name::"""DECnet-object-number="""
```

For example, if the server to connect to is on node GUMBY and is running under the default DECnet object number of 43 for VTX, the command is:

```
$ DEFINE VTX$SERVER GUMBY::"""43="""
```

The two colons, six double quotation marks, and the equal sign are required. Omission of any of these will cause an error. The DEFINE command overwrites any previous definitions of VTX$SERVER.

3. The VTX server DECnet object is not available.

   To verify that the server is running with the DECnet object number specified, access server mode in the VTXCTL control utility and enter the following command at the SRV> prompt:

```
SRV> SHOW COMMUNICATION
```

If VTX displays the message *Communications not enabled for server,* communications must be started. Enter START COMMUNICATION at the VTXCTL SRV> prompt.

If VTX displays a message similar to *Server is DECnet object number 43,* check to see that the object number shown matches the object number entered in the DCL DEFINE VTX$SERVER command, as explained in solution 2.

If communication has been started and the object numbers match, but the problem still exists, the problem probably exists with a remote server. If you have a remote server, run the Network Control Program (NCP) by entering the following command at the DCL prompt:

```
$ RUN SYS$SYSTEM:NCP
```

At the NCP prompt, enter the following command:

```
NCP> TELL node SHOW OBJECT object_number
```

Enter the remote node name and its object number in the NCP command. For example:

```
NCP> TELL GUMBY SHOW OBJECT 43
```

If the remote server is running as expected on the node specified and with the DECnet object number specified, an Object Volatile Summary report is displayed. Otherwise, the following error message is displayed:

```
%NCP-I-NMLRSP, listener response, Unrecognized component, Object
```

If you receive this error message, contact the VTX operator on the remote node. Ask the operator to start the appropriate remote server (with the VTXCTL Utility START SERVER command at the CTL> prompt).

Then make sure the remote server object number is the same object number that was specified on the local node. To verify, access the VTXCTL Utility and enter the SHOW REMOTE command at the SRV> prompt.

4. The node VTX is running on is not defined in the local network database.

   Access NCP. At the NCP prompt, enter SHOW NODE node name. For example, for the node named GUMBY, enter the command:

   ```
   NCP> SHOW NODE GUMBY
   ```

   If the node is defined, a Node Volatile Summary report is displayed.

   If the node is not defined, the following message is displayed:

   ```
   %NCP-I-NMLRSP, listener response, Unrecognized component, Node
   ```

Contact your VMS system manager to have the NCP database updated with the node name.

G.2 VAX VTX Operator Problems

This section describes the following VTX operator problems:

- Operator cannot access the VTXCTL Utility—insufficient privileges
- Operator cannot specify a Workbench page in the BPDF
- Operator cannot start VTX server—unable to access startup command procedure
- Operator cannot start VTX server—VTX times out, but creates the error log file
- Operator cannot start VTX server—VTX times out, but does not create error log file

G.2.1 Operator Cannot Access the VTXCTL Utility—Insufficient Privileges

Explanation:

The following error message is displayed immediately after the VTX operator issues the command RUN SYS$SYSTEM:VTXCTL at the DCL prompt:

```
%VTX-E-INSUFFPRIV, insufficient privileges, refer to documentation
```

Cause:

The VTX operator's account does not have the correct process privileges. These privileges must be set either as the default privileges, or the operator must manually set the privileges before issuing the START SERVER command. It is not sufficient to have the process privileges set up as authorized privileges or to use SETPRV.

Solution:

Issue the command SHOW PROCESS/PRIVILEGES at the DCL prompt to check that the VMS account has the following process privileges:

- GROUP
- GRPNAM
- NETMBX

- SYSNAM
- TMPMBX

If any privilege is missing, ask your VMS system manager to add the privilege to your account using the VMS Authorize Utility. You must then log out of your account and log in again to have the new privileges take effect.

G.2.2 Operator Cannot Specify a Workbench Page in the BPDF

Explanation:

The VTX operator wants to specify a Workbench page for one or more base pages in the Base Page Determination File (BPDF). Because VTX automatically numbers Workbench pages, the VTX operator does not know the page numbers.

Solution:

Determine the page number VTX assigned to the page as follows:

- Access the Workbench Utility
- Select the LOCATE option and specify the page name
- Select the PAGE INFO option
- Select the GENERAL suboption

  The assigned page number is displayed on the third line of the General Page Control Information form.

Specify this page number in the Base Page Determination File.

G.2.3 Operator Cannot Start VTX Server—Unable to Access Startup Command Procedure

Explanation:

The following error message is displayed immediately after the VTX operator issues the START SERVER command at the CTL> prompt in the VTX Control Utility (VTXCTL):

```
%VTX-E-NOSTARTUP, unable to access startup command procedure
                  SYS$LOGIN:VTXSERVER.COM
```

Cause:

VTX cannot create the server process because the server startup file (VTXSERVER.COM) is not in the SYS$LOGIN default directory of the VTX operator's account. VTX uses VTXSERVER.COM to start a detached process for the server.

Solution:

If the VTXSERVER.COM command procedure does not exist, copy it to the SYS$LOGIN directory from the SYS$SYSROOT:[VTX$LIBRARY] directory, or contact the VMS system manager to copy the file for you.

G.2.4 Operator Cannot Start VTX Server—VTX Times Out, but Creates the Error Log File

Explanation:

This problem occurs after the VTX operator issues the START SERVER command at the CTL> prompt in the VTXCTL Utility. VTX usually responds with a series of "...working..." messages and then starts the server or times out because of problems.

If there appears to be a problem, *wait* for VTX to time out. Do *not* use a control sequence to exit from the "...working..." messages. If you force VTX to exit, VTX will not create the error log file (VTXSRV_name.VTE) or display the appropriate error messages.

Causes and Solutions:

The error log file provides more information on the cause.

Common errors that the error log file might report are:

1. The base page determination file (VTXBASE.TXT) does not exist.

   The VTXBASE.TXT file must be in the login directory (SYS$LOGIN) of the VTX operator's account, or if it is in some other location, the logical VTX$BPDF must point to it. You can copy the VTXBASE.TXT file from the SYS$SYSROOT:[VTX$LIBRARY] directory.

2. The account authorization file (VTXACF.VTA) does not exist.

   The VTXACF.VTA file must be in the login directory (SYS$LOGIN) of the VTX operator's account, or if it is in some other location, the logical VTX$ACF must point to it. You can create this file by running the VTX Account Control Utility (VTXACU), as explained in Chapter 3.

3. The VTX server image file (VTXSRV.EXE) is not found in the SYS$SYSTEM directory.

   Check to see if VTXSRV.EXE is in the SYS$SYSTEM directory. If it is not, VTX has not been correctly installed, or someone has tampered with the VTX files.

4. The login command procedure (LOGIN.COM) in the VTX operator's account has a command (SET PROCESS/NAME=name) that changes the process name.

   Delete any SET PROCESS/NAME commands in the LOGIN.COM file.

G.2.5 Operator Cannot Start VTX Server—VTX Times Out, but Does Not Create Error Log File

Explanation:

This problem occurs after the VTX operator issues the START SERVER command at the CTL> prompt in the VTXCTL Utility. VTX usually responds with a series of "...working..." messages and then starts the server or times out because of problems.

If there appears to be a problem, *wait* for VTX to time out. Do *not* use a control sequence to exit from the "...working..." messages. If you force VTX to exit, VTX will not create the error log file (VTXSRV_name.VTE).

In this case, the user has waited for VTX to time out. VTX refers the user to the error log file. However, the error log file is not created.

Cause:

The VMS account does not have all the required process quotas, or the quotas are set too low.

Solution:

Issue the command SHOW PROCESS/QUOTAS at the DCL prompt to check that the VMS account has the following process quotas:

- AST limit—ASTLM 200
- Buffered I/O limit—BIOLM 200
- Buffered I/O byte count limit—BYTLM 65000
- Direct I/O limit—DIOLM 50
- Enqueue quota—ENQLM 300
- Open file quota—FILLM 200

- Timer queue entry quota—TQELM 20

If any quota is too low, ask your VMS system manager to increase the quota in your account using the VMS Authorize Utility. You must then log out of your account and log in again to have the new quota take effect.

G.3 VAX VTX Information Provider (IP) Problems

This section describes the following IP problems:

- All keywords are not deleted when a page is deleted with VTXUPD
- All keywords are not extracted when a page is extracted with VTXUPD
- IP added page help on a form page, but subscriber cannot access it
- IP added pages with VTXUPD, but subscriber cannot access them
- IP cannot connect to the update server—object does not exist
- IP cannot connect to the Workbench server—object does not exist
- IP cannot remove a page using the APMS REMOVE command
- Workbench IP added pages, but subscriber cannot access them
- Workbench IP deleted pages, but subscriber can still access them
- Page control information on menu, form, or display pages is displayed to subscriber

G.3.1 All Keywords Are Not Deleted When a Page Is Deleted with VTXUPD

Explanation:

The page and keyword files are open when the IP issues the DELETE/PAGE command to delete pages. The page is deleted and some, but not all, keywords are deleted.

Cause:

The remaining keywords are those that were added after the page was initially added to the infobase. These keywords must be deleted separately.

Solution:

Use the Infobase Verification Utility to get a listing of keywords associated with the nonexistent page. Access VTXUPD and open the keyword file. Use the DELETE/KEYWORD to delete each keyword one by one.

G.3.2 All Keywords Are Not Extracted When a Page Is Extracted with VTXUPD

Explanation:

The page and keyword files are open when the IP issues the EXTRACT/PAGE command to extract pages. The pages are extracted to the VTU file and some, but not all, keywords are extracted.

Cause:

The remaining keywords are those that were added after the page was initially added to the infobase. These keywords must be extracted separately.

Solution:

Use the Infobase Verification Utility to get a listing of keywords associated with the nonexistent page.

G.3.3 IP Added Page Help on a Form Page, but Subscriber Cannot Access It

Explanation:

The IP has specified page help for a form page and added the help page to the infobase. However, subscribers do not see page help when they press the PAGE HELP key sequence while viewing the form page. The subscriber receives the message *No Help Available* or possibly an unexpected page.

Cause:

The help page number was specified incorrectly when the form or help page was added. Help for form pages is entered differently from help for menu or display pages.

On menu or display pages, only one help page can be associated with the page. On form pages, each field can have a help page associated with it. When the subscriber presses the PAGE HELP key sequence while viewing a VTX form, VTX looks for a help page for the field the cursor is located on.

Solution:

To add field help on a form page correctly, the IP must complete two steps:

1. Enter the VTXUPD ADD/TYPE=FORM or COMPOSE/TYPE=FORM command followed by the qualifier /HELP=page-number. VTX uses this page number to associate help pages with each field by taking this help page number and appending to it the field number. It is easier to remember the help page number if it is the same number as the form page number. For example:

```
UPD> ADD 2830./TYPE=FORM/IMAGE=LOANAPP.TXT/HELP=2830
> FIELD 1 21 6 5
> FIELD 2 23 8 5
>
```

2. Enter a help page for each field requiring help. The page number for the help page must be the help page number (entered with the /HELP qualifier on the previous command) followed by the field number. Field numbers 1 to 9 must be prefixed by 0; that is, they are entered as 01 to 09. For example, to enter field help pages for the form page in the previous example, the commands are:

```
UPD> ADD 283001./IMAGE=FIELD1.HLP
UPD> ADD 283002./IMAGE=FIELD2.HLP
```

When the subscriber presses the PAGE HELP key sequence while viewing field 1, VTX searches for a help page number consisting of the form page number (2830 in this example) appended with the field number (01). If the IP has entered a help page numbered 283001, this page is displayed. If page 283001 does not exist, the message *No Help Available* is displayed.

G.3.4 IP Added Pages with VTXUPD, but Subscriber Cannot Access Them

Explanation:

The IP has added pages to the infobase using the VTXUPD Utility, and VTXUPD has responded with the message:

```
Total of x pages added
```

However, when the subscriber accesses VTX, the pages are not available.

Cause:

The page file (VTD file) was not opened on the VTX server. If keywords were added, the keyword file (VTK file) must also be opened on the VTX server.

When the infobase is being updated, page and keyword files must be opened on both the VTX server and the Workbench server.

Solution:

Connect to the VTX server through the VTX Control Utility (VTXCTL) and open the page file with the OPEN/PAGE command. For example,

```
SRV> OPEN/PAGE filename.VTD/SHARE
```

Then access the VTXUPD Utility again, reopen the page and keyword files, and update the infobase.

G.3.5 IP Cannot Connect to the Update Server—Object Does Not Exist

Explanation:

The following error message displays after an IP enters the CONNECT command at the UPD prompt in the VTXUPD Utility:

```
%VTX-I-SRVNOOBJ, Can't connect to server---object doesn't exist
```

Causes and Solutions:

There are three possible reasons why the IP might receive the above message. Review them in sequence.

1. There is an invalid definition or no definition for VTX$UPDSRV.

   To see what is defined for VTX$UPDSRV, enter the following command at the DCL prompt:

   ```
   $ SHOW LOGICAL VTX$UPDSRV
   ```

   You should see an entry similar to one of the following, where GUMBY is the nodename defined and 56 is the DECnet object number defined:

   - "VTX$UPDSRV" = "GUMBY::"56="" (LMN$PROCESS_TABLE)
   - "VTX$UPDSRV" = "GUMBY::"56="" (LMN$JOB_TABLE)
   - "VTX$UPDSRV" = "GUMBY::"56="" (LMN$GROUP_TABLE)
   - "VTX$UPDSRV" = "GUMBY::"56="" (LMN$SYSTEM_TABLE)

   Verify that the node name and object number are correct and that the equal sign and quotation marks are correctly placed.

If the logical VTX$UPDSRV is defined at more than one level, VMS will use the logicals in the order listed above. That is, the process table definition is used first, followed by the job table, group table, and finally the system table definitions.

If the logical name is correctly defined and the problem still exists, go to solution 2.

If the definition is not correct or there is no translation for the logical VTX$UPDSRV, you must define it using the DEFINE command in the format:

```
$ DEFINE VTX$UPDSRV nodename::"""DECnetobjectnumber="""
```

For example, if the server to connect to is on node GUMBY and is running under the default DECnet object number of 56 for VTX, the command would be:

```
$ DEFINE VTX$UPDSRV GUMBY::"""56="""
```

The two colons, six double quotation marks, and the equal sign are required. Omission of any of these will cause an error. The DEFINE command overwrites any previous definitions of VTX$UPDSRV.

2. The VTX update server DECnet object is not available.

   Use VTXCTL to verify that the server is running with the DECnet object number specified. Enter the following at the UPDSRV> prompt:

   ```
   UPDSRV> SHOW COMMUNICATION
   ```

   If VTX displays the message *Communications not enabled for update server,* communications must be started. Enter START COMMUNICATION at the UPDSRV> prompt.

   If VTX displays a message similar to *Update server is DECnet object number 56,* check to see that the object number shown matches the object number entered in the DEFINE VTX$UPDSRV command as explained in solution 1.

   If communications is started and the object numbers match, but the problem still exists, the problem probably exists with a remote server.

3. The node that VTX is running on is not defined in the local network database.

   If you have a remote server, run the Network Control Program (NCP) by entering the following command at the DCL prompt:

   ```
   $ RUN SYS$SYSTEM:NCP
   ```

At the NCP prompt, enter SHOW NODE nodename. For example, for the node named GUMBY, enter:

```
NCP> SHOW NODE GUMBY
```

If the node is defined, a Node Volatile Summary report is displayed.

If the node is not defined, the following message displays:

```
%NCP-I-NMLRSP, listener response, Unrecognized component, Node
```

Contact your VMS system manager to have the NCP database updated with the node name.

Verify that the remote server is running as expected on the node specified and with the DECnet object number specified. At the NCP prompt, enter the following command:

```
NCP> TELL node SHOW OBJECT objectnumber
```

Enter the remote node name and its object number in the NCP command. For example:

```
NCP> TELL GUMBY SHOW OBJECT 56
```

If the remote server is running as expected on the node specified and with the DECnet object number specified, an Object Volatile Summary report is displayed. Otherwise, the following error message is displayed:

```
%NCP-I-NMLRSP, listener response, Unrecognized component, Object
```

If you receive this error message, contact the VTX operator on the remote node. Ask the operator to start the appropriate remote update server using the VTXCTL Utility (START UPDATE_SERVER command at the CTL> prompt).

G.3.6 IP Cannot Connect to the Workbench Server—Object Does Not Exist

Explanation:

The following error message displays after a Workbench IP selects an option which attempts to access the Workbench server:

```
The Workbench server specified by the logical VTX$WB_SERVER is not available.
```

Causes and Solutions:

There are three possible reasons why the IP might receive the above message. Review them in sequence.

1. There is an invalid definition or no definition for VTX$WB_SERVER.

   To see what is defined for VTX$WB_SERVER, enter the following command at the DCL prompt:

   ```
   $ SHOW LOGICAL VTX$WB_SERVER
   ```

   You should see an entry similar to one of the following, where GUMBY is the nodename defined and 56 is the DECnet object number defined:

   - "VTX$WB_SERVER" = "GUMBY::"56="" (LMN$PROCESS_ TABLE)
   - "VTX$WB_SERVER" = "GUMBY::"56="" (LMN$JOB_TABLE)
   - "VTX$WB_SERVER" = "GUMBY::"56="" (LMN$GROUP_TABLE)
   - "VTX$WB_SERVER" = "GUMBY::"56="" (LMN$SYSTEM_TABLE)

   Verify that the node name and object number are correct and that the equal sign and quotation marks are correctly placed.

   If the logical VTX$WB_SERVER is defined at more than one level, VMS will use the logicals in the order listed above. That is, the process table definition is used first, followed by the job table, group table, and finally the system table definitions.

   If the logical name is correctly defined and the problem still exists, go to solution 2.

   If the definition is not correct or there is no translation for the logical VTX$WB_SERVER, you must define it using the DEFINE command in the format:

   ```
   $ DEFINE VTX$WB_SERVER nodename::"""DECnetobjectnumber="""
   ```

   For example, if the server to connect to is on node GUMBY and is running under the default DECnet object number of 56 for VTX, the command would be:

   ```
   $ DEFINE VTX$WB_SERVER GUMBY::"""56="""
   ```

   The two colons, six double quotation marks, and the equal sign are required. Omission of any of these will cause an error. The DEFINE command overwrites any previous definitions of VTX$WB_SERVER.

2. The Workbench server DECnet object is not available.

   To verify that the server is running with the DECnet object number specified, access VTXCTL and enter the following at the WBSRV> prompt:

   ```
   WBSRV> SHOW COMMUNICATION
   ```

   If VTX displays the message *Communications not enabled for Workbench server,* communications must be started. Enter START COMMUNICATION at the WBSRV> prompt.

   If VTX displays a message similar to *Workbench server is DECnet object number 56,* check to see that the object number shown matches the object number entered in the DEFINE VTX$WB_SERVER command as explained in solution 1.

   If communications is started and the object numbers match, but the problem still exists, the problem probably exists with a remote server.

G.3.7 IP Cannot Remove a Page Using the APMS REMOVE Command

Explanation:

When the IP issues the SHOW/PAGE * command in APMS, APMS indicates the following page exists:

```
TRACK 4-FEB-1989 17:00:44.45
```

TRACK is the header name, and 4-FEB-1989 17:00:44.45 is the unique *page-tag* for that page.

The IP tries to remove the page with the REMOVE command as follows:

```
APMS> REMOVE/PAGE TRACK 4-FEB-1989 17:00:44.45
```

However, an error message indicates the header name TRACK does not exist.

Cause:

APMS records the unique *page-tag* in the page assignment file (PAF) with leading spaces (if any). If the *page-tag* is being automatically added with a date/time stamp, the day field in the date will have a leading space if the day is a single digit, such as 4 in the example. The leading space will become part of the *page-tag* in the file (_4). The REMOVE command does not recognize the leading space.

Solution:

Use either of the following two solutions:

- Enclose the *page-tag* and the space in quotes. For example:

```
APMS> REMOVE/PAGE TRACK " 4-FEB-1989 17:00:44.45"
```

- Delete the leading spaces in the *page-tag*.

G.3.8 Workbench IP Added Pages, but Subscriber Cannot Access Them

Explanation:

The Workbench IP has used the IMAGE FILE option and specified continuation display pages. However, subscribers cannot access the primary display page or any of the continuation pages.

Cause:

The Workbench IP has used the IMAGE FILE option and specified each continuation page individually with the /CONTINUATION qualifier. This is *not* the correct way to enter continuation pages. Each subsequent entry overwrites the previous entry. The Workbench Utility does not find the last page entered because it is looking for a primary page file name, not a continuation page file name.

With the IMAGE FILE option, the IP should specify only the primary page followed by the /CONTINUATION qualifier. Each continuation page is *not* individually specified. However, the IP must create individual image files for the primary page and each continuation page and number them as follows:

- The primary page has a file name in the format: filename.IMG.
- Each continuation page has the same file name followed by a continuation page number: filenamennnnn.IMG.

For example, if the primary page name is STOCK.IMG, the first continuation page must be named STOCK00001.IMG, the second continuation page must be named STOCK00002.IMG, and so on. When using the IMAGE FILE suboption in the Workbench Utility, the IP enters STOCK.IMG/CONTINUATION. At the next load operation, the Workbench Utility will look for the image file STOCK.IMG and all other files prefixed with STOCK and followed by a number.

Solution:

Locate the display page that has the image file reference. Select the IMAGE FILE option, and specify the primary file name with the /CONTINUATION qualifier.

G.3.9 Workbench IP Deleted Pages, but Subscriber Can Still Access Them

Explanation:

The Workbench IP located a previously updated menu structure. Then the IP used the Workbench DELETE function to delete a choice on a menu that references a submenu structure. The IP then updated the revised menu structure.

When the IP views the infobase, the menu does not show the choice that referenced the submenu structure, but the submenu and its display pages still exist.

Cause:

The DELETE operation was done incorrectly. The submenu and its display pages are unreferenced pages. These pages will be displayed on the Infobase Verification Utility (IVU) report as unreferenced pages.

Solution:

To delete the submenu entirely from an infobase, the IP must locate the submenu itself, rather than just locate the submenu reference. Then the IP must delete all the pages the submenu references and then the submenu itself.

G.3.10 Page Control Information on Menu, Form, or Display Pages Is Displayed to Subscriber

Explanation:

When a subscriber views a particular page, page control information (such as keywords, title, or menu choices) or field definitions are displayed at the top of the page.

Cause:

The page control information was entered incorrectly in the VTU file used with the VTXUPD Utility. To add page control information on a page in a VTU file, you must include one of the following qualifiers after the ADD or COMPOSE command: /OPTIONS, /TYPE=MENU, or /TYPE=FORM. If these qualifiers are not used, all text in a VTU file that falls between the ADD or COMPOSE command and the next form feed is considered display text.

To specify page control information:

- On display pages, specify the /OPTIONS qualifier before the information.
- On menu pages, specify the /TYPE=MENU qualifier before the information. Each menu choice entry should be preceded by the word CHOICE. However, CHOICE can be omitted *if* the /OPTIONS qualifier is used.
- On form pages, specify the /TYPE=FORM qualifier before the information. Each form field entry should be preceded by the word FIELD. However, FIELD can be omitted *if* the /OPTIONS qualifier is used.
- On menu and form pages, if both the /OPTIONS qualifier and the word CHOICE or FORM are omitted, the VTXUPD Utility will store the text following the ADD or COMPOSE command as display text.

Solution:

Insert the /OPTIONS qualifier at the end of the ADD or COMPOSE command for the problem page. For example:

```
UPD> ADD/PAGE/TYPE=MENU 10/OPTIONS
1 11
2 14
3 18
Title "Industry News Menu"
Keyword News
```

G.4 VAX VTX TCP Command Procedure Problems

This section describes the following TCP command procedure problems:

- Message "Undefined Symbol" is displayed after LINKPAD.COM and LINKCON.COM are run
- Object files not found by LINKPAD.COM and LINKCON.COM

G.4.1 Message "Undefined Symbol" Is Displayed After LINKPAD.COM and LINKCON.COM Are Run

Explanation:

After minor changes are made to the TCP, the TCP link command procedures (LINKPAD.COM and LINKCON.COM) generate the error message *undefined symbol* when they are run.

Causes and Solutions:

There are two possible causes and solutions.

1. The logicals TCPLIB, DSLREQUIRE, and VTX$REQUIRE are not defined.

   Use the DCL command SHOW LOGICAL logical-name to verify that the logicals TCPLIB, DSLREQUIRE, and VTX$REQUIRE are defined. If they are not defined, you must define them using the following DCL DEFINE command:

   ```
   $ DEFINE logical-name equivalent-name
   ```

   For example:

   ```
   $ DEFINE TCP$LIB SYS$SYSROOT:[TCPLIB]
   ```

2. The object libraries have been modified.

   Issue the following command at the DCL prompt to verify if the object libraries have been modified:

   ```
   $ LIBRARY/LIST/HISTORY/FULL PAD.OLB
   ```

   This command lists all the object library modules that have been changed, including the dates of the changes. If changes have been made, you must find a workaround for your changes or reinstall the TCP files.

NOTE

After you have resolved the problem with the undefined symbol, you might get a message indicating a weak reference to UIS or 3270. The command procedures are looking for UIS and 3270 software, which is not installed. The command procedures will build the image correctly. However, subscribers will not be able to use UIS or 3270 based terminals.

G.4.2 Object Files Not Found by LINKPAD.COM and LINKCON.COM

Explanation:

When the TCP linking command procedures, LINKPAD.COM and LINKCON.COM are used, the command procedures do not find the object files referenced, even though they are in the appropriate directories.

Cause:

Your account might have a logical name defined that corresponds to the object files being referenced. For example, having a logical VTX defined will cause errors on the link.

Solution:

Issue the DCL command SHOW LOGICAL logical-name for each object file name. Check to see if logical names are defined that correspond to the object files being referenced. If logical names are defined, change the logical names.

G.5 Enhancing Infobase Performance

To enhance performance on performance-critical applications, see the *Guide to VMS File Applications*. The concepts and suggestions described in that document are applicable to infobase and Workbench library files. This information is particularly useful if files are preallocated to process large infobase updates. To implement the suggestions, you must process the files through the CONVERT Utility. When using CONVERT, be careful not to change record sizes or key parameters.

Because the Workbench library file VTX$WBSRV_UIF.VTX is a work file used during an infobase update, it is beneficial to routinely use the CONVERT/RECLAIM utility on this file. After the Workbench Utility has been used to delete a large number of infobase pages, use CONVERT/RECLAIM on the other Workbench library files.

See the description of the CREATE commands in Part III of the *VAX VTX Information Provider's Guide* for additional methods of increasing infobase performance.

Appendix H

VTXCTL Error Messages

This appendix explains the error messages generated by the VTXCTL Utility. Error messages reported by the server, concentrator, update server, or Workbench server are written to the appropriate error log file: VTXSRV.VTE, VTXSRV_name.VTE, VTXCON.VTE, VTXCON_name.VTE, VTXUPDSRV.VTE, VTXUPDSRV_name.VTE, VTX$WBSRV.VTE, or VTX$WBSRV_name.VTE. (Name refers to the name given to the process when it was started.) For a thorough explanation of the VTXCTL Utility, see Chapter 2.

The error messages are arranged in alphabetical order. The explanation of each error starts with the severity level of the message (information, warning, error, or fatal) and a brief description of the error. Most explanations are followed by a recommended user action.

For some error messages, the recommended user action is to submit a Software Performance Report (SPR). The SPR form, available through your Digital sales representative, is used to report errors that cannot be resolved by the user.

BADVTAPDS

Warning: Invalid VTXPDS message received, length xxxxx. A message sent by an IBM passthrough application was not expected or was not understood by the IBM 3270 TSM.

User Action: Check the header of the message logged with it to determine what was sent.

BPERR

Error: Error reading VTXBASE.TXT.

User Action: Check file format in Chapter 3. Check the error log file VTXSRV.VTE, or VTXSRV_name.VTE for a named server, to see why the error occurred.

COMALST

Warning: Communication already started. An attempt was made to start communication after the START COMMUNICATION command had already been issued.

User Action: Use the STOP COMMUNICATION command to stop communication before issuing the START COMMUNICATION command again.

COMNOTSTRT

Warning: Communication not currently started. An attempt was made to stop communication when in fact the START COMMUNICATION command had not yet been issued.

User Action: None.

CONNOTRESP

Warning: The concentrator is not responding or is not running.

User Action: Check to see if the concentrator is still running by issuing the SHOW SYSTEM command at DCL level and checking for VTXCON, or VTXCON_name for a named concentrator. If the concentrator is not running, check the error log file, VTXCON.VTE or VTXCON_name.VTX for a named concentrator, to see why it stopped. Then restart it. If the concentrator is still running, either the concentrator or the system is heavily loaded. Reenter the command.

CTL_CON_FAIL

Information: The concentrator process is not running.

User Action: Check the error log file, VTXCON.VTE or VTXCON_name.VTE for a named concentrator, for the reason.

CTL_SRV_FAIL

Information: The server process is not running.

User Action: Check the error log file, VTXSRV.VTE or VTXSRV_name.VTE for a named server, for the reason.

CTL_USRV_FAIL

Information: The update server process is not running.

User Action: Check the error log file, VTXUPDSRV.VTE or VTXUPDSRV_name.VTE for a named update server, for the reason.

CTL_WBSRV_FAIL

Information: The Workbench server process is not running.

User Action: Check the error log file, VTX$WBSRV.VTE or VTX$WBSRV_name.VTE for a named Workbench server, for the reason.

DBIO

Warning: Infobase file I/O error. Reported through the VTXCTL Utility by the server or update server. Most commonly caused by an incorrect file specification or a missing or inaccessible file. This message is generally followed by an RMS error message that describes the problem.

User Action: Verify and correct the problem, then try again.

DBNF

Warning: Infobase file not found. A SHOW or CLOSE command was given to show or close a file that was not currently open.

User Action: Use the SHOW FILE/ALL command to show all files that are open. To show one file, be sure to enter the file name used in the OPEN command. This message is issued by the server and update server only.

DECSPECREQ

Warning: You issued a remote command that needs to include either a DECnet link specification or the /HERE qualifier.

User Action: Reenter the command with either a DECnet link specification for a remote server or the /HERE qualifier for a local server.

DECTALK_NOHAND

Error: DECtalk handshake not complete—device unavailable. The operator attempted to assign a DECtalk unit on a concentrator and DECtalk was turned off.

User Action: Turn DECtalk on and try again.

ERRCLSLIB

Warning: The Workbench server could not close the Workbench library files.

User Action: Reenter the command. If repeated attempts to reenter the command fail, stop the Workbench server.

ERRCRELIB

Warning: The Workbench server could not create the Workbench library files. If the Workbench library is in someone else's account, your access to it is probably restricted. Another possible cause of this error is a shortage of disk space. Your account might also have too many files open already.

User Action: Verify and correct the problem, then try again.

ERROPNLIB

Warning: The Workbench server could not open the Workbench library files. If someone other than you created the files, they might be protected against your accessing them.

User Action: Verify and correct the problem, then try again.

FILALROPN

Warning: You tried to open an infobase file that is already open.

User Action: Check the command to see if the correct file name was entered. If not, reenter the command.

FILENO

Warning: Unable to open output file. Reported by the VTXCTL Utility when it is unable to open a file, such as a log file or /OUTPUT= filename.

User Action: Check directory protections and account file limits.

IBMAPPERR

Warning: IBM application error, IBM message: xxxxx Buffer Length xxxxx. Error in the IBM passthrough application.

User Action: Check the IBM message code to determine the problem.

INSUFFPRIV

Error: The VMS account you are using does not have the required privileges to run VTXCTL.

User Action: See Chapter 2 for a list of the required privileges, and have the system manager update your account.

INVDECSPEC

Warning: You used an invalid DECnet specifier. The required format is node::"num=". For example, VAX12::"161=" is a valid DECnet specifier.

User Action: Reenter the command with a valid DECnet specifier.

INVFILVER

Warning: File is not a VTX V4.0 infobase file.

User Action: Verify that the file name and file type are correct. If the file is a pre-Version 4.0 page file, the file must be converted using the conversion utility described in Appendix F.

INVLIBFIL

Warning: Invalid file found in Workbench library. Library is invalid.

User Action: Create a new Workbench library to replace the invalid one. See the error log file, VTX$WBSRV.VTE or VTX$WBSRV_name.VTE for a named Workbench server, for more information.

INVMAXSESS

Warning: You specified an invalid value for the /MAXSESS qualifier. A valid value must be in the range of 1 to 65535.

User Action: Reenter the command with a valid value for /MAXSESS.

INVOBJNUM

Warning: You specified an invalid DECnet object number. A valid DECnet object number must be in the range of 1 to 255.

User Action: Reenter the command with a valid DECnet object number.

INVPAGRNG

Warning: You specified an invalid page range. The low end of a page range specification must have a lower ASCII value than the high end.

User Action: See the description of the OPEN/PAGE command (from SRV>, UPDSRV>, or WBSRV> mode) for an explanation of ASCII page numbering. Reenter the command with a valid page range.

INVSESSID

Warning: Invalid session identifier. The session identifier specified for a SHOW SESSION or STOP SESSION command had an invalid format.

User Action: See Chapter 2 for valid format.

INVSPECLEN

Warning: An invalid DECnet specification was given. The DECnet specification provided with the REMOTE command was longer than 40 characters. This message is sent from the server only.

User Action: Reenter the command with a valid DECnet specification.

LATACCDENIED

Error: Access is denied. The session is stopped.

User Action: Make sure the LAT ports are created correctly and then restart the session.

LATCURREQ

Error: Corrupted request. The session is stopped.

User Action: Make sure the LAT ports are created correctly and then restart the session.

LATDISSRVC

Error: Service is disabled. The session is stopped.

User Action: Make sure the LAT ports are created correctly and then restart the session.

LATFNCNOTSUP

Error: The specified function is not supported. The session is stopped.

User Action: Make sure the LAT ports are created correctly and then restart the session.

LATILLREQPAR

Error: Illegal request parameters. The session is stopped.

User Action: Make sure the LAT ports are created correctly and then restart the session.

LATIMDACCREJ

Warning: Immediate access rejected.

User Action: None.

LATINSSRVRES

Warning: Insufficient resources at the server.

User Action: None.

LATINUSE

Warning: Port or service is in use.

User Action: None.

LATNOSERVICE

Error: No such service. The session is stopped.

User Action: Make sure the LAT ports are created correctly and then restart the session.

LATPORTUNKN

Error: The LAT port name you specified is unknown. The session is stopped.

User Action: Make sure the LAT ports are created correctly and then restart the session.

LATQUEDELETE

Warning: Queue entry deleted by the server.

User Action: None.

LATSESNOTSTRT

Error: The session cannot be started. The session is stopped.

User Action: Make sure the LAT ports are created correctly and then restart the session.

LATSRVNOTOFF

Error: Service is not offered on the requested port. The session is stopped.

User Action: Make sure the LAT ports are created correctly and then restart the session.

LATSS_ABORT

Warning: The connection cannot be made due to the reason listed in the message that follows this message.

User Action: See the user action for the message that follows this message.

LATSS_DEVACTIVE

Error: The application port is already in use. The session is stopped.

User Action: Make sure the LAT ports are created correctly and then restart the session.

LATSS_ILLIOFNC

Error: The QIO request is not to an applications port. The session is stopped.

User Action: Make sure the LAT ports are created correctly and then restart the session.

LATSS_TIMEOUT

Warning: The connection has timed out.

User Action: None.

LATSYSSHTDWN

Error: System shutdown is in progress. The session is stopped.

User Action: Make sure the LAT ports are created correctly and then restart the session.

LIBALROPN

Warning: You issued an OPEN/LIBRARY command after the Workbench library had already been opened.

User Action: None.

LIBNOTOPN

Warning: The Workbench library was not open when you tried to close it.

User Action: None.

LOGALST

Warning: Logging is already started. An attempt was made to start server logging when this had already been done.

User Action: To modify logging as specified, you must stop logging and then restart it with the desired qualifiers.

LOGIO

Warning: Server cannot open or write to the log file.

User Action: Examine the file specification of the log file to see if the file is to be placed in an existing directory with VMS file write/read access allowed. Verify that the file name and file type are valid.

LOGNOTSTRT

Warning: Logging not started. An attempt was made to stop logging when in fact it had not been started.

User Action: None.

MBXINIT

Error: Control mailbox could not be created.

User Action: Attempt to start the detached component again. Verify proper quotas and limits in your VMS account. Reported in the error log file: VTXSRV.VTE, VTXSRV_name.VTE, VTXCON.VTE, VTXCON_name.VTE, VTXUPDSRV.VTE, or VTXUPDSRV_name.VTE.

MBXIO

Warning: Mailbox I/O problem. One of the mailboxes used for communicating between the VTXCTL Utility and the server, update server, or concentrator is experiencing some kind of problem.

User Action: Exit from VTXCTL, then reenter VTXCTL and try again. On repeated failure, please submit an SPR describing the command sequence that causes the failure.

NAMTOOLNG

Warning: The process name is too long. The name can be a maximum of five characters.

User Action: Reenter the command with a valid server name.

NETIO

Warning: A DECnet object number was specified that is either invalid or already in use.

User Action: See Volume 5, Networking, in the *VMS System Management Subkit* for valid object numbers. Use the NCP Utility to check if an object is already declared with this number.

NOACF

Error: The VTX account file, VTXACF.VTA, could not be opened.

User Action: Make sure you are in your SYS$LOGIN directory. Check to see if the account file, VTXACF.VTA, exists in that directory. If it does not and it used to, move it back to that directory. If this is the first time you have tried to start a server or update server, you need to run the VTXACU Utility and create an account file before the server or update server can be started. Reported in the error log file: VTXSRV.VTE, VTXSRV_name.VTE, VTXUPDSRV.VTE, or VTXUPDSRV_name.VTE.

NOBPDF

Error: The VTX base page determination file, VTXBASE.TXT, could not be opened.

User Action: Make sure you are in your SYS$LOGIN directory. Check to see if the base page determination file, VTXBASE.TXT, exists in that directory. If it does not and it used to, put it back. If this is the first time you have tried to start a server, you need to run the VTXACU Utility and create an account file before the server can be started. Reported in the error log file: VTXSRV.VTE or VTXSRV_name.VTE for a named server.

NOCOMM

Warning: Unable to establish communication or network object. The START COMMUNICATION/OBJECT=n command specified an object that is either invalid or already in use.

User Action: Check the object number. If it is invalid, reenter the command with a valid object number.

NOCONCOM

Warning: Concentrator communication has not been established. Either the concentrator has stopped running, or it is so heavily loaded that it could not service the connect request in time.

User Action: Check to see if the concentrator is running by issuing a SHOW SYSTEM command at DCL level and checking for VTXCON, or VTXCON_name for a named concentrator. If the concentrator is not running, check the error log file, VTXCON.VTE or VTXCON_name.VTX for a named concentrator, for the reason it stopped. Then restart it. If the concentrator is running, reenter the START COMMUNICATION command.

NOCREPCON

Error: Unable to create concentrator process. The system has run out of process slots or your VMS account has insufficient quotas or restrictive limits.

User Action: Verify and correct the problem, then try again.

NOCREPSRV

Error: Unable to create server process. The system has run out of process slots or your VMS account has insufficient quotas or restrictive limits.

User Action: Verify and correct the problem, then try again.

NOCREUSRV

Error: Unable to create update server process. The system has run out of process slots or your VMS account has insufficient quotas or restrictive limits.

User Action: Verify and correct the problem, then try again.

NOCREWBSRV

Error: Unable to create Workbench server process. The system has run out of process slots or your VMS account has insufficient quotas or restrictive limits.

User Action: Verify and correct the problem, then try again.

NODBSPEC

Warning: No infobase file specification was provided on a CLOSE command.

User Action: Specify CLOSE/ALL or enter a SHOW FILE/ALL command to get the exact file name.

NOREMNAM

Warning: No remote name specified on the SHOW command.

User Action: Specify a remote name or the /ALL qualifier. This message is sent from the server only.

NOSECT

Warning: No such infobase section. Reported by the server and update server when an attempt is made with an OPEN or CLOSE command to open a nonexistent file or close a section file that is not open.

User Action: Reenter the command with the correct infobase section file name.

NOSESSFOU

Warning: No sessions were found with the specified session identifier. Sent when a SHOW SESS or STOP SESSION command was issued that found no sessions to show or stop; for example, SHOW SESSION/ALL when no current sessions exist, or STOP SESS=99-2af-0 when it does not exist.

User Action: Reenter the command with the correct session identifier.

NOSESSID

Warning: No session identifier was specified with the SHOW or STOP command.

User Action: Specify either the /SESS=id parameter or the /ALL qualifier.

NOSNA

Error: You did not have the DECnet/SNA VMS 3270 Data Stream programming interface installed when you installed VAX VALU.

User Action: Install the required software, and then reinstall VAX VALU.

NOSRVCOM

Warning: Server communication has not been established. Either the server has stopped running, or it is so heavily loaded that it could not service the connect request in time.

User Action: Check to see if the server is running by issuing a SHOW SYSTEM command at DCL level and checking for VTXSRV, or VTXSRV_name for a named server. If the server is not running, check the error log file, VTXSRV.VTE or VTXSRV_name.VTE for a named server, for the reason it stopped. Then restart it. If the server is running, enter the CONNECT SERVER command.

NOSTARTUP

Error: You tried to start a VTX process (server, concentrator, update server, or Workbench server) and the startup command file (VTXSERVER.COM, VTXCON.COM, VTXUPDSRV.COM, or

VTX$WBSRV.COM) either does not reside in the SYS$LOGIN directory or the file's protection prevents you from reading it.

User Action: Verify that the startup command file exists in the SYS$LOGIN directory and the protection is set for group read access.

NOTKWDFIL

Warning: Your OPEN/KEYWORD or CLOSE/KEYWORD command specified a file that is not a VTX keyword file. The file you specified might be a page file, or you might have misspelled the file name.

User Action: Reenter the command with a valid keyword file.

NOTPAGFIL

Warning: Your OPEN/PAGE or CLOSE/PAGE command specified a file that is not a VTX page file. The file you specified might be a keyword file, or you might have misspelled the file name.

User Action: Reenter the command with a valid page file.

NOUSRVCOM

Warning: Update server communication has not been established. Either the update server has stopped running, or it is so heavily loaded that it could not service the connect request in time.

User Action: Check to see if the update server is running by issuing a SHOW SYSTEM command at DCL level and checking for VTXUPDSRV, or VTXUPDSRV_name for a named update server. If the update server is not running, check the error log file, VTXUPDSRV.VTE or VTXUPDSRV_name.VTE for a named update server, for the reason it stopped. Then restart it. If the update server is running, reenter the START COMMUNICATION command.

NOWBSRVCOM

Warning: Workbench server communication has not been established. Either the Workbench server has stopped running, or it is so heavily loaded that it could not service the connect request in time.

User Action: Check to see if the Workbench server is running by issuing a SHOW SYSTEM command at DCL level and checking for VTX$WBSRV, or VTX$WBSRV_name for a named Workbench

server. If the Workbench server is not running, check the error log file, VTX$WBSRV.VTE or VTX$WBSRV_name.VTE for a named Workbench server, for the reason it stopped. Then restart it. If the Workbench server is running, reenter the CONNECT WORKBENCH_SERVER command.

PARTLIB

Warning: Partial Workbench library found. Library is invalid.

User Action: Either restore the missing library file or create the entire library again.

PGLOGNOTST

Warning: Page logging is not currently started.

User Action: None.

PORTNF

Warning: Port not found. Reported by concentrator only. In an attempt to assign or deassign a port, the port specified was not found.

User Action: Reenter the command with a valid port name.

QUALIC

Warning: Incompatible qualifiers used with the command.

User Action: See this document for an explanation of the command and its qualifiers. Then reenter the command.

REMNOTFOU

Warning: No remote names were found with the specified remote name. A remote name was specified on a SHOW REMOTE command, but the remote name was not found.

User Action: Reenter the command with a valid remote name, or use the SHOW REMOTE/ALL command. Reported by the server only.

SNA3270DS_INVL_SESS

Error: You cannot specify zero sessions in an ASSIGN/SNA3270DS command.

User Action: Assign one or more SNA3270DS sessions.

SNACONERR

Error: An error has occurred as a result of an ASSIGN/SNA3270DS command.

User Action: Check VTXCON.VTE, or VTXCON_name.VTE for a named concentrator, for a full description of the error.

SNA_Error

Warning: An SNA 3270 datastream error occurred at [date/time]. This message is followed by one or more lines indicating why the IBM host rejected the connection.

User Action: Check the IBM message code to determine the problem.

SNAIBMINIT

Error: SNA IBM application initialization failure. The IBM application that you tried to connect to could not assign a port. The cause of the error depends on the site-specific implementation of the IBM pass-through application.

User Action: Verify and correct the problem, then try again.

SRVNOTRESP

Warning: The server is not responding or is not running.

User Action: Check to see if the server is still running by issuing a SHOW SYSTEM command at DCL level and checking for VTXSRV, or VTXSRV_name for a named server. If the server is not running, check the error log file, VTXSRV.VTE or VTXSRV_name.VTE for a named server, to see why it stopped. Then restart it. If the server is running, reenter the command; either the server or the system is heavily loaded.

SYSSRVERR

Error: An unexpected VMS system service error occurred.

User Action: Exit from the VTXCTL Utility and try again. On repeated failure, verify that the VMS account you are using has the required quotas and limits.

UNCONRES

Warning: Unexpected concentrator response. The VTXCTL Utility received an unexpected message from the concentrator. VTXCTL and the concentrator are no longer running synchronously.

User Action: Exit from VTXCTL, reenter, and try again. On repeated failure of a known command sequence, please submit an SPR documenting that sequence.

UNEXPRES

Warning: Unexpected server, concentrator, or update server response. The VTXCTL Utility received an unexpected message from the server, concentrator, update server, or Workbench server. VTXCTL and the server, concentrator, update server, or Workbench server are no longer running synchronously.

User Action: On repeated failure of a known command sequence, please submit an SPR documenting that sequence.

UNSRVRES

Warning: Unexpected server response. The VTXCTL Utility received an unexpected message from the server. VTXCTL and the server are no longer running synchronously.

User Action: Exit from VTXCTL, reenter, and try again. On repeated failure of a known command sequence, please submit an SPR documenting that sequence.

UNUSRVRES

Warning: Unexpected update server response. The VTXCTL Utility received an unexpected message from the update server. VTXCTL and the update server are no longer running synchronously.

User Action: Exit from VTXCTL, reenter, and try again. On repeated failure of a known command sequence, please submit an SPR documenting that sequence.

UNWBSRVRES

Warning: Unexpected Workbench server response. The VTXCTL Utility received an unexpected message from the Workbench server. VTXCTL and the Workbench server are no longer running synchronously.

User Action: Exit from VTXCTL, reenter, and try again. On repeated failure of a known command sequence, please submit an SPR documenting that sequence.

USRVNOTRESP

Warning: The update server is not responding or is not running.

User Action: Check to see if the update server is still running. Issue a SHOW SYSTEM command at DCL level and check for VTXUPDSRV, or VTXUPDSRV_name for a named update server. If the update server is not running, check the error log file, VTXUPDSRV.VTE or VTXUPDSRV_name.VTE for a named update server, to see why it stopped. Then restart it. If the update server is still running, reenter the command; either the update server or the system is heavily loaded.

VALTOOLONG

Error: You specified a qualifier value that was longer than allowed.

User Action: Check all your qualifier values against their documented limits.

VS_FATINTERR

Fatal: A fatal internal Workbench server error has occurred.

User Action: Please submit an SPR. Include a copy of both the Workbench server error log file, VTX$WBSRV.VTE or VTX$WBSRV_name.VTE for a named Workbench server, and the VTXBUGCHK.DMP file generated by the Workbench server when the error occurred. Both these files are created in the SYS$LOGIN directory of the VTX operator's account.

VS_FILBADFRAG

Warning: The Workbench server received the error status code RMS$_RVU from an attempted RMS operation.

User Action: Compress the specified error log file, VTX$WBSRV.VTE or VTX$WBSRV_name.VTE for a named Workbench server, as soon as possible using the DCL CONVERT command. If this is not done, data might be lost.

VS_INVLIBVER

Warning: The Workbench server found that the version level of the specified library file was invalid.

User Action: Ask your system manager to install the latest release of the VTX software.

VS_LIBHDRERR

Warning: An RMS error occurred when the Workbench server tried to read the header record of the specified library file.

User Action: Take corrective action based on the RMS error that occurred.

WBSRVNOTRESP

Warning: The Workbench server is not responding or is not running.

User Action: Check to see if the Workbench server is still running by issuing a SHOW SYSTEM command at DCL level and checking for VTX$WBSRV, or VTX$WBSRV_name for a named Workbench server. If the Workbench server is not running, check the error log file, VTX$WBSRV.VTE or VTX$WBSRV_name.VTE for a named Workbench server, to see why it stopped. Then restart it. If the Workbench server is still running, reenter the command; either the Workbench server or the system is heavily loaded.

X29_COMM_NOSTART

Error: X.29 communications is not started. You tried to stop X.29 communication from the CON> prompt after communication had already been stopped.

User Action: None.

X29_COMM_START

Error: X.29 communications already started. You issued a START COMMUNICATION/X29 command after communication had already been started.

User Action: None.

X29_INVL_SESS

Error: You cannot specify zero sessions in an ASSIGN/X29 command.

User Action: Assign one or more X.29 sessions.

Appendix I

VTXACU Error Messages

This appendix explains the error messages generated by the VTXACU Utility. For a thorough explanation of the VTXACU Utility, see Chapter 3.

The error messages are arranged in alphabetical order. The explanation of each error starts with the severity level of the message (information, warning, error, or fatal) and a brief description of the error. Most explanations are followed by a recommended user action.

For some error messages, the recommended user action is to submit a Software Performance Report (SPR). The SPR form, available through your Digital sales representative, is used to report errors that cannot be resolved by the user.

ACU_ACCMISSREC

Warning: One or more records are missing from an account. The account file VTXACF.VTA has been corrupted.

User Action: Please submit an SPR. Include a listing of the account file and a description of the sequence of events leading up to this error.

ACU_BADPRFCON

Warning: An internal error has occurred.

User Action: Please submit an SPR.

ACU_ERRCREACF

Warning: The VTXACU Utility encountered an error while trying to create the VTX account file VTXACF.VTA.

User Action: Check to see if you have restrictive directory protection or insufficient VMS account privileges.

ACU_ERRCRELIS

Warning: The VTXACU Utility encountered an error when trying to create a VTXACU listing file.

User Action: Check to see if you have restrictive directory protection or insufficient VMS account privileges.

ACU_ERRCRELOG

Warning: The VTXACU Utility encountered an error in trying to create a log file VTXACF.VTL.

User Action: Check to see if you have restrictive directory protection or insufficient VMS account privileges.

ACU_ERROPNACF

Warning: The VTXACU Utility encountered an error while trying to open the account file VTXACF.VTA.

User Action: Check to see if you have restrictive directory protection or insufficient VMS account privileges.

ACU_FILIOERR

Error: The VTXACU Utility has encountered an internal file I/O error.

User Action: Please submit an SPR. Include a description of the command sequence that caused the error and a sample of the output.

ACU_FILNAMREQ

Warning: You used the /OUTPUT qualifier without specifying a file name.

User Action: If you want output written to a file, you must specify a file name with the /OUTPUT qualifier.

ACU_GRPALRDEC

Warning: You entered a MODIFY/GROUP command with a closed user group number that is already in the subscriber's account control record.

User Action: Reenter the command without the group number.

ACU_HASSUPER

Warning: The subscriber already has superuser privilege; that is, the subscriber can access any page in the infobase. You attempted to add a group qualifier to a subscriber account with superuser privileges.

User Action: Revoke the privilege before attempting to assign a group qualifier.

ACU_ILLGRPUSE

Warning: You specified a closed user group in a situation where a closed user group cannot be specified. You cannot, for example, assign closed user group numbers to IP accounts.

User Action: Reenter the command without the closed user group specification.

ACU_ILLPAGVAL

Warning: You specified an illegal or unrecognized character in one of the page values of a page range.

User Action: See Chapter 3 for the proper format for specifying page ranges, then reenter the command.

ACU_ILLRANUSE

Warning: You specified a page range in a situation where a page range cannot be specified. You cannot, for example, assign page ranges to subscriber accounts.

User Action: Reenter the command without the page range.

ACU_INVACCNAM

Warning: You entered an invalid account name. The account name might have contained a space or other illegal character.

User Action: See Chapter 3 for the proper way to specify account names.

ACU_INVGRPVAL

Warning: You specified an invalid closed user group number. A closed user group number must be between 1 and 4095, inclusive.

User Action: Reenter the command with a valid closed user group number.

ACU_INVPAGRNG

Warning: You specified an invalid page range. The start of the range was probably not lower than the end of the range.

User Action: Correct the range specification, and reenter the command.

ACU_INVPASSLEN

Warning: You specified a password that is too long. A password cannot exceed 32 characters.

User Action: Reenter the command with a valid password.

ACU_INVPASSVAL

Warning: You specified a password with invalid characters in it. The valid characters for a password include the letters A to Z, the numerals 0 to 9, the dollar sign ($), and the underscore (_).

User Action: Reenter the command with a valid password.

ACU_INVPREF

Warning: You specified a prefix with invalid characters in it. A prefix can contain only the numerals 0 to 9.

User Action: Reenter the command with a valid prefix.

ACU_IPALREX

Warning: You tried to enter an information provider account that already exists in the account file VTXACF.VTA.

User Action: If you are unsure whether or not an information provider account exists, issue a SHOW/IP command.

ACU_IPNOTFOU

Warning: You specified an information provider account that cannot be found in the account file VTXACF.VTA. Most likely you misspelled the account name.

User Action: Check account name before reentering the command.

ACU_MAXGRPEX

Warning: You specified more than the maximum number of closed user groups (4096) for an account.

User Action: Reenter the command, and specify fewer closed user groups.

ACU_MAXRNGEX

Warning: You specified more than the maximum number of page ranges (100) for an account.

User Action: Reenter the command, and specify fewer page ranges.

ACU_NODENOTDEF

Warning: Node name not defined. SYS$NODE is not a system logical, and no accounts will have the default node name.

User Action: Ask your system manager to start DECnet and define SYS$NODE for your system.

ACU_NOHDR

Warning: The account file is not a VTX file.

User Action: Check to see if you used an incorrect directory specification or misspelled the filename. Check to make sure the specified file has been created.

ACU_NONEXRNG

Warning: You entered a MODIFY/IP command with a nonexistent page range. For example, you might have tried to remove a page range that did not exist in the information provider's account record.

User Action: If you are unsure of an IP account's page ranges, use the SHOW/IP command.

ACU_NONNUMGRP

Warning: You specified a nonnumeric closed user group number.

User Action: Reenter the command with closed user group numbers in numeric format.

ACU_NOPMREC

Warning: A subscriber's personal magazine record is missing. The account file VTXACF.VTA is corrupted.

User Action: Please submit an SPR, and include an account file listing.

ACU_NOPREFIL

Warning: You specified a nonexistent prefix file in an OPEN/PREFIX command.

User Action: Check to see if you used an incorrect directory specification or misspelled the filename. Check to make sure the specified prefix file has been created. The prefix file is automatically created when you issue the OPEN/LIBRARY command from the WBSRV> prompt of the VTXCTL Utility.

ACU_NOSUCHGRP

Warning: You entered a MODIFY/NOGROUP command with a closed user group number that was not found in the subscriber's account control record.

User Action: Check to make sure the closed user group number and subscriber name is correct.

ACU_NOTPREFIL

Warning: VTXACU found the file you specified, but it is not a prefix file.

User Action: Check to make sure the filename is correct.

ACU_NOTPREHDR

Warning: The file is a Workbench file, but its header indicates that it is not the Workbench prefix file.

User Action: Examine the naming conventions you use for your Workbench files.

ACU_PAGSIZEX

Warning: You specified a page number that exceeds the maximum size of a page number. A page number cannot exceed 14 characters.

User Action: Reenter the command with a valid page number.

ACU_PASSVALREQ

Warning: You used the /PASSWORD qualifier without specifying a value.

User Action: Specify a value with the /PASSWORD qualifier.

ACU_PRENOTFND

Warning: You tried to modify, show, or delete a prefix value that cannot be found in the Workbench prefix file.

User Action: If you are not sure which prefix values are in the Workbench prefix file, issue a SHOW/PREFIX command.

ACU_PRFEXISTS

Warning: You tried to add a prefix value that already exists in the prefix file.

User Action: If you are not sure which prefix values are in the Workbench prefix file, issue a SHOW/PREFIX command.

ACU_PRFPUTERR

Warning: An error occurred while a record was being written to the prefix file.

User Action: Read the text of the error message for a more detailed explanation of the cause.

ACU_RANGEOVER

Warning: You exceeded the number of page ranges allowed for a single account. You can specify a maximum of 100 page ranges.

User Action: Reduce the number of page ranges, merging some ranges with others where possible, until you can successfully reenter the command.

ACU_RESETFAILA

Warning: The VTXACU Utility encountered an error while trying to reset account usage information. The information has not been logged and has not been reset.

User Action: Reenter the command. In the event of persistent failure, please submit an SPR. Include a listing of the account file and the sequence of commands.

ACU_RESETFAILB

Warning: The VTXACU Utility encountered an error while trying to reset account usage information. The information has been logged but not reset.

User Action: Reenter the command. In the event of persistent failure, please submit an SPR. Include a listing of the account file and the sequence of commands.

ACU_RNGALREX

Warning: You tried to give an information provider account access to a page range to which it already has access.

User Action: If you are unsure of an IP account's page ranges, use the SHOW/IP command.

ACU_RNGMISSVAL

Warning: You specified a page range with one or more values missing.

User Action: See Chapter 3 in this document for the proper format for specifying page ranges. Then reenter the command.

ACU_SUBALREX

Warning: You tried to add a subscriber account that already exists in the account file VTXACF.VTA.

User Action: If you are unsure whether or not a subscriber account exists, issue a SHOW/ALL command.

ACU_SUBNOTFOU

Warning: You specified a subscriber account that cannot be found in the account file VTXACF.VTA. Most likely you misspelled the account name.

User Action: Check the account name before reentering the command.

ACU_UNBALQUO

Warning: Your quotation marks are unbalanced. You entered one half of a set of quotation marks without entering the other half.

User Action: Check your command line, and reenter it correctly.

ACU_UNRECLANG

Warning: You entered an unrecognized language specifier. You cannot use abbreviations when entering language specifiers.

User Action: Check your command line, and reenter it correctly.

ACU_USGREC

Warning: A usage record cannot be found for the specified account. The account file VTXACF.VTA has been corrupted.

User Action: Please submit an SPR. Include an account file listing and describe the sequence of events leading up to the error.

Appendix J

VTXIVU Error Messages

This appendix explains the error messages generated by the VTXIVU Utility. For a thorough explanation of the VTXIVU Utility, see Chapter 4.

The error messages are arranged in alphabetical order. The explanation of each error starts with the severity level of the message (information, warning, error, or fatal) and a brief description of the error. Most explanations are followed by a recommended user action.

For some error messages, the recommended user action is to submit a Software Performance Report (SPR). The SPR form, available through your Digital sales representative, is used to report errors that cannot be resolved by the user.

IVU_INVBASFIL

Error: The base page determination file you specified could not be accessed. The verification proceeded without the base page determination file. This is most commonly caused by an improper file specification, a nonexistent file, or insufficient privileges to access the file.

User Action: Check your command line, and reenter it correctly.

IVU_INVKEYFIL

Error: The keyword file you specified could not be accessed. The verification proceeded without the keyword file. This is most commonly caused by an improper file specification, a nonexistent file, or insufficient privileges to access the file.

User Action: Check your command line, and reenter it correctly.

IVU_INVOUTFIL

Error: The output file you specified could not be created. You may have entered an improper file specification or you may lack sufficient privileges to create the file.

User Action: Check your command line, and reenter it correctly.

IVU_INVPAGFIL

Error: The page file you specified could not be accessed. The verification proceeded without the page file. This is most commonly caused by an improper file specification, a nonexistent file, or insufficient privileges to access the file.

User Action: Check your command line, and reenter it correctly.

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